

RECORDING · THE · ELECTRICAL · ERA

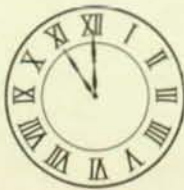
VOL. XXIX

WASHINGTON, D. C., SEPTEMBER, 1930

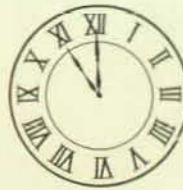
NO. 9



Anti-Union Propaganda



Your Fortune in a Day

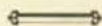


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Washington, D. C.

OFFICIAL ORGAN OF THE INTERNATIONAL ELECTRICAL WORKERS AND OPERATORS

PUBLISHED MONTHLY

G. M. BUGNIAZET, *Editor*, 1200 15th Street N. W., Washington, D. C.

This Journal will not be held responsible for views expressed by correspondents.

The first of each month is the closing date; all copy must be in our hands on or before.

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Magazine Chat

Brother Jerome C. Pentis (Chicago) writes to inform us that there is no port by the name "Memel" in Germany. This is in reference to an article by Brother Frank Tustin on Seattle in the July issue. "Very likely Tustin means Klaipeda, a seaport of the Republic of Lithuania. Klaipeda was under German rule before the war with the name of Memel."

Brother Tustin is philosophical about this correction. He writes: "Kindly inform Mr. Jerome C. Pentis that I stand corrected, but that the data used was obtained from the Seattle Public Library, and without doubt was written before democracy prevailed throughout the world. It is somewhat of a sense of gratification, however, that someone at least read the article."

We are proud to have as learned a reader as Pentis, and as generous a contributor as Tustin.

Copies of this Journal will again be sent to Japan this year to be exhibited in the international display of periodicals held under the auspices of Maruzen Company, Ltd., a leading firm of the eastern kingdom, with branches in all Japan cities.

Hartford is the latest city to bring forth a new labor publication, "The Craftsman," a monthly. This is published under the auspices of the Central Labor Union. Brother William Steinmiller is president of the central body.

Thousands and thousands saw the Electrical Workers' exhibit at the Illinois State Fair, reports Thomas Kelly, vice president of the Illinois State Federation of Labor. This exhibit is reproduced in this issue of the Journal.

Chant of Progress

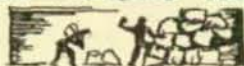
by
JOHN GRAY MULLEN

Little by little, breath by breath
Strong men build against the day of death!

Little by little, star by star
They chart the waters where shadows are.



Little by little, stone by stone
Cities they build where deserts shone.



Little by little, spark by spark
They light the world with a magic arc.



Little by little, dream against dream
They bind the peoples with ether's stream.



Little by little, mood against mood
They span the skies with a bird of wood.



Little by little, faith by faith
Strong men build against the day of death.



THE JOURNAL OF ELECTRICAL WORKERS & OPERATORS

Official Publication of the International Brotherhood of Electrical Workers

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Vol. XXIX

WASHINGTON, D. C., SEPTEMBER, 1930

No. 9

New Secret Documents Etch League's Character

THE revelations made by the ELECTRICAL WORKERS' JOURNAL in May, describing the secret annual session of the League for Industrial Rights brought widespread republication through the United States and Canada. Public interest in an organization, which avowedly exists for the sole purpose of destroying social agencies like unions, is keen and constant. Students called repeatedly at this office for copies of the May JOURNAL, and numerous letters were received asking for more information.

The League for Industrial Rights, founded as the Anti-Boycott Association in 1902, has its offices at 165 Broadway, New York City. Its staff, mostly lawyers, are housed there, and its official organ, "Law and Labor" is published there. Save for the name of its associate counsel, Walter Gordon Merritt, and its executive secretary, T. Yeoman Williams, and its editor, Murray T. Quigg, nothing is known of the men, who compose the organization—that, is nothing until the ELECTRICAL WORKERS' JOURNAL published the men present at the speakers' table at the annual banquet.

The League, it is known, is constantly in the courts, pressing cases against labor unions. It claims in its official literature, now about to be exposed to view, that it is responsible for long series of cases, mostly involving the use of the injunction, running through the lower and higher court over a period of a quarter of a century. Everyone knows that this is tremendously expensive business. Estimates vary, but at existing rates it is likely that the League for Industrial Rights spends from \$400,000 to \$1,000,000 a year in litigation. Someone must foot this huge bill. It is not likely that Walter Gordon Merritt, and his firm, Gleason, McLanahan, Merritt and Ingraham, fanatical though Mr. Merritt is, give their services for nothing. Nor is it likely that Mr. Davenport, or Mr. Cassells, or Mr. Canale, or Mr. Houts, or Mr. Stanley, or Mr. Hewes, or Mr. Quigg, other lawyers connected with the League, give their services for nothing. The wealth of industry must be tapped to raise this million odd dollars each year for the purpose of nullifying organized labor's influence through legal decisions.

Huge Contributions

The method used is simple. Corporation members of the League are assessed on a payroll percentage basis. They pay from \$40 to \$600 a year. With such a system, it is apparent that a million dollars a year can be quickly raised for the purpose designated.

The official documents of the League describe the process thus:

"INITIATION FEE—\$25 to accompany application.

"ANNUAL DUES—Whenever funds are required, the Executive Board authorizes a call of assessment to the members at the rate of \$1 per \$1,000 on their productive payrolls for the preceding month. No more

Officers of the League for Industrial Rights, and its method of raising huge sums to destroy unionism revealed for the first time. Secret organization begins to yield facts of its hidden life.

than four assessments being called in one year.

"A monthly payroll averaging \$10,000 (\$120,000 per year) would call for the payment of \$10 per assessment or an annual maximum of \$40. Larger or smaller payrolls in proportion. No member, however, is assessed on a monthly payroll in excess of \$500,000.

"Salaries of executives and payrolls of office and selling staff are not assessed.

"Resignations go into effect three months after their date upon the payment of any dues owing.

"The membership rolls are not published, support to the League being regarded as a confidential matter to be revealed only with the consent of the subscriber."

The willingness of employers to contribute to the League year after year suggests the need of students to study the appeals made and methods used by the League for Industrial Rights. In the first place, the co-operating employers are of the old-fashioned type—men without the scientific or social point of view—men filled with the lust for power. They wage class warfare, unequivocally and relentlessly. This the League knows, and it is to this low motive of class hatred, and of class fear that the League literature appeals.

Self-Righteousness Evident

"Co-operation in meeting a common peril" is one slogan.

"In Great Britain where there is no League for Industrial Rights and none of this protection exists, the closed shop prevails."

"The collapse of government in protecting liberty and property during industrial strife is an outstanding menace in our country." (To what this refers is not clear. It is notorious that the government has frequently and usually used its powers in behalf of employers, notably in railroad disputes.)

In addition to these alarms, and these goads to class warfare, the League literature are models of self-righteousness and super-holiness. Modern psychologists—Freud and Jung—tell us that men tend to disguise their true motives even to themselves. The disguise for the low motives of class hatred which League members manifest is religious piety.

"I want to congratulate you on the way

the League is growing in wisdom, in stature, and in favor with God and man."

In favor with God—how intimate this union-destroyer is with the Master Workman of the Universe!

Mr. Walter Gordon Merritt, whose fanatical hatred of unions is well-known, manages to throw over the League literature the air of a cause. One member speaks of "a cause as great as this."

"To promote the public welfare"; "to oppose federal and state legislation injurious to the public good"; are self-righteous descriptions of the League's nefarious work.

"The great issue with which the League has struggled for over two decades is whether the law and the constitution shall continue to function for the protection of the right to work and the right to conduct business." Again the pious disguise of the self-righteous hypocrite. It has been repeatedly shown that the League's sole function is to destroy unionism through the courts. The League literature from which we are quoting makes this motive clear. Finding, after 25 years of test cases, that it can not completely tie up labor activities with legal knots, the League is now seeking to pass bills through state legislatures. These bills will forbid picketing absolutely. They will make strikes illegal. They will make labor unions suable on any pretext. We quote:

Seek Drastic Laws

"Several years ago the League extended its program to include the advocacy of new legislation based on fundamental principles which were in the public interest.

"It drafted various proposed measures, notable among which were the following: 1. To protect the public from unwarranted industrial warfare; 2. Making unincorporated associations suable; 3. Forbidding picketing.

"An active campaign has been carried on for the introduction and passage of these measures in various state legislatures.

"The first bill aims to codify the fundamental principles of law and morality in connection with industrial warfare not only for the protection of employers and employees, but for the protection of the public in general.

"Briefly, the bill forbids organized strikes or lockouts in connection with government employment; in violation of agreements between employers and employees; in violation of arbitration awards; in connection with railroads or public utilities where a fair and reasonable offer of arbitration has not first been made and rejected; in connection with sympathetic strikes; to prevent or terminate the employment of any person because of membership or non-membership in any labor union, etc. (Copies of these bills will be sent upon request.)"

Spread College Propaganda

Like other private institutions seeking to promote private aims with the air of public

benefactors, the League has a wide-spread propaganda. It is seeking to get its official organ "Law and Labor" widely read. In addition, it is seeking to reach the college student of the country.

"Both faculty and student bodies in educational institutions have taken an increased interest in industrial problems, and have welcomed outside speakers and pamphlets giving special viewpoints. Advantage has been taken of this situation by radical organizations making strenuous efforts to reach students with their speakers and written propaganda. This propaganda is seemingly well-planned and well-financed and widespread. College clubs, classes and forums have given heed to the written and spoken word of socialist societies. One socialist society states that in 1924 one of its lecturers 'addressed 35,000 college students in 85 colleges and universities from Maine to California.' It further claims that it has enrolled as members 2,500 college students and in 73 leading colleges of the country it has student organizations.

"The League for Industrial Rights has undertaken to counteract this influence by

furnishing speakers who will overcome this radical propaganda and will endeavor to inculcate sound principles of industry and government. Departments of economics and sociology, and sometimes student bodies of the entire university have been addressed upon this most important subject. Our speakers have met with cordial co-operation of college faculties and students and in every case they have aroused great interest on the part of the students. The experiment has brought to the attention of the officers of the League an amazing ignorance of those phases of the industrial problem to which the League has devoted its attention."

The men behind this secret organization refuse to make themselves known. At the secret annual session in New York city last March the following were present:

Walter Wood, probably Walter Wood, partner of R. D. Wood and Co., 400 Chestnut St., Philadelphia; treasurer and director, Cumberland County Gas Co.; treasurer and director, Millville Water Co.; treasurer and director, Millville Electric Light Co.; treasurer and director, Oswego Water Works; director, Burlington City Loan and Trust Co.; president and director, Florence Pipe, Foundry and Machine Co.

Francis D. Campau.

W. K. Stanley, probably Welles Kirk Stanley, partner, Stanley and Horowitz, 1070 Union Trust Bldg., Cleveland, Ohio; counsel and director, Lake Eve Trust Co.; president and director, Stearns Motor Sales Co.; director, North American Manufacturing Co.; district counsel, League for Industrial Rights.

John E. Edgerton, probably John E. Edgerton, president National Manufacturers' Association, anti-union, pro-child labor, pro-high tariff lobbying group. James Sherlock Davis.

S. L. Nicholson.

H. H. Rice. Daniel Davenport, general counsel, League for Industrial Rights.

Henry D. Sharpe, probably Henry D. Sharpe, president and treasurer, Brown and Sharpe Manufacturing Co., Providence, R. I.; president, Puritan Life Insurance Co.; vice president Providence Ins. Co.; director New England Telephone and Telegraph Co.; director, Providence Institution for Savings; trustee, Brown University.

Governor John A. Trumbull, Connecticut anti-union electrical manufacturer.

Walter Gordon Merritt, associate counsel, League for Industrial Rights.

Francis J. Arend, probably Francis J. Arend, president De Laval Separator Co., New York City; director, Fidelity Trust Co., New York City, director, Allenhurst (N. J.) National Bank; president, American Realty Co.

LEGISLATIVE ACTIVITIES

Ever since the organization of the League, its General Counsel has been at Washington during all Congressional Sessions to confer with Congressmen and Senators and appear before Committees in connection with pending labor bills.

His work there has been invaluable to industry and has been conducted in such an exemplary manner as to command the respect and confidence of public officials.

CONSTRUCTIVE LEGISLATION

* Several years ago the League extended its program to include the advocacy of new legislation based on fundamental principles which were in the public interest.

It drafted various proposed measures, notably among which were the following: 1. To protect the public from unwarranted industrial warfare; 2. Making unincorporated associations suable; 3. Forbidding picketing.

An active campaign has been carried on for the introduction and passage of these measures in various State Legislatures.

The first bill aims to codify the fundamental principles of law and morality in connection with industrial warfare not only for the protection of employers and employees, but for the protection of the public in general.

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FACSIMILE

John A. Coe, probably John A. Coe, president American Brass Co., Waterbury, Conn.; director, Avocada Copper Co.; president, Waterbury Hines Corporation; director, Colonial Trust Co.

Alexander Sellers, probably Alexander Sellers, president William Sellers and Co., Philadelphia, Pa.

James A. Emery, counsel, National Manufacturers' Association, well-known lobbyist.

Magnus W. Alexander, probably Magnus W. Alexander, president, National Industrial Conference Board, supposedly impartial research organization.

T. Yeoman Williams, 165 Broadway; principal office, League for Industrial Rights.

To these names, may now be added the following:

Officers

Chairman, William Fellowes Morgan, New York City, Chairman of the Board, Merchants' Refrigerating Company.

Vice Chairman, Charles Cheney, South Manchester, Conn., treasurer, Cheney Brothers.

LEAGUE FOR INDUSTRIAL RIGHTS

OFFICERS

Chairman

William Fellowes Morgan, New York City.
Chairman of the Board, Merchants' Refrigerating Company.

Vice-Chairman

Charles Cheney, South Manchester, Conn.
Treasurer, Cheney Brothers.

Treasurer

James Sherlock Davis, Brooklyn, N. Y.
President, Cross, Austin & Ireland Lumber Company.

Executive Secretary

T. Yeoman Williams, 165 Broadway, New York City.

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District Counsel

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Cassels, Potter & Bentley, The Rookery,
Chicago, Ill.

Phil M. Canale,
Holmes & Canale, Bank of Commerce Bldg.,
Memphis, Tenn.

Charles A. Houts,
Boatmen's Bank Bldg., St. Louis, Mo.

W. K. Stanley,
Stanley & Horwitz, Union Trust Bldg., Cleveland,
Ohio.

Thomas Hewes,
Hewes, Phillips & Lindsey, 18 Asylum Street,
Hartford, Conn.

Murray T. Quigg, Editor, Law and Labor,
165 Broadway, New York City.

And corresponding Attorneys in other industrial centers

(Names of Executive Committee and General Executive Board furnished upon request.)

September, 1926.

FACSIMILE

Treasurer, James Sherlock Davis, Brooklyn, N. Y., President, Cross, Austin and Ireland Lumber Company.
Executive Secretary, T. Yeoman Williams, 165 Broadway, New York City.

Legal Staff

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Thomas Hewes, Hewes, Phillips and Lindsey, 18 Asylum Street, Hartford, Conn.
Murray T. Quigg, Editor, Law and Labor, 165 Broadway, New York City.

This array of legal talent reveals the nature of the League. It exists for the purpose of destroying unionism through legal nullification of union rights. It boasts of the fact in its secret literature.

"The League, organized to aid and advise governmental officials in industrial crises and to protect its members by private suits, has accomplished much," it declares.

"In case a legal suit is necessary to protect a member's rights, the expense of such suit, if approved by the executive committee, will be borne by the League. The League has never refused to bear such expense."

The cost of this legal warfare is enormous, the League admits.

"Our test cases sometimes cover a costly contest of five, ten or fifteen years. The results are enduring, and benefit all who do business under the law of our land. They are precedents cited as the foundation for thousands of cases which follow. To the structure of industrial law under which free-men do business the League has made an immeasurable contribution.

One Case \$2,000,000

"The Railroad Injunction Case of 1922 is said to have cost the government nearly \$2,000,000—what then of the burden and value of the work of the League?"

The League's description of the test cases throttling labor unions, and incidentally bringing federal courts in disrepute, as witnessed by the Judge Parker incident, is interesting.

Loewe v. Lawlor (Danbury Hatters' case), 208 U. S. 274.

Boycotts of the American Federation of Labor in violation of the Anti-Trust Law. Members of the trade union responsible for the acts of their officers. Damages recovered.

Gompers v. Buck's Stove and Range Company, 221 U. S. 419.

The equity powers of the Federal Court in industrial disputes sustained. The right of free speech affords no immunity against an injunction prohibiting the use of the word "unfair" or the circulation of unfair lists.

Duplex Printing Press Company v. Deering, 254 U. S. 443.

Sections 6 and 20 of the Clayton Act prohibiting the use of injunctions in certain cases between employers and employees does not legalize a secondary boycott in violation of the Sherman Anti-Trust Law and an injunction will issue to restrain such a boycott.

Coronado Coal Co. v. United Mine Workers. The Supreme Court held labor union suable.
Paine v. Neal, 244 U. S. 459.

A combination of carpenters refusing to handle non-union ma-

COST OF MEMBERSHIP

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MEMBERSHIP OF CIVIC BODIES

~~Chambers of Commerce, Boards of Trade and Civic Organizations.~~

~~INITIAL FEE.~~—\$25 to accompany application.

~~DUES.~~—\$10 each assessment.

CONTRIBUTIONS

From those to whom immediate membership seems impracticable, contributions are invited in whatever sums their interest may suggest.

FACSIMILE

terial brought in through interstate trade is a violation of the Sherman Anti-Trust Law. *Connors v. Connolly*, 86 Atl. 600, Conn.

A workman prevented from working at his trade by a union because of his non-membership therein is entitled to damage. A monopolistic combination to maintain the closed shop is illegal.

Auburn Draying Co. v. Wardell, 227 N. Y. 1.

The refusal of sundry trades to work upon material hauled by non-union teamsters in order to assist in unionizing teamsters is a secondary boycott against which an injunction will issue and damages be awarded.

Burgess Bros., Inc. v. Stewart, 184 N. Y. Supp. 199, 187 N. Y. Supp. 873.

Union employees may not strike against the transportation of goods because they were made or delivered by non-union men.

Wm. Wicke Ribbon Company case, N. Y. Law Journal, Nov. 30, 1920.

The right of peaceful picketing ends when the factory has been remanned and business normally resumed.

EDUCATIONAL WORK IN COLLEGES

Both faculty and student bodies in educational institutions have taken an increased interest in industrial problems, and have welcomed outside speakers and pamphlets giving special viewpoints. Advantage has been taken of this situation by radical organizations making strenuous efforts to reach students with their speakers and written propaganda. This propaganda is seemingly well-planned and well-financed and widespread. College clubs, classes and forums have given heed to the written and spoken word of socialist societies. One socialist society states that in 1924 one of its lecturers "addressed 35,000 college students in 85 colleges and universities from Maine to California". It further claims that it has enrolled as members 2,500 college students and in 73 leading colleges of the country it has student organizations.

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FACSIMILE

COMMENT

By

PRESIDENT BROACH

WHAT is it a man hates to give up most? His reputation, his money, his power, or his prejudices? Neither. I insist it's his illusions, his wishing and dreaming. He sticks to these until the last. If he gives up his illusions, he quickly gets himself a new set. Man is happiest when wishing and dreaming. He usually believes only what he wants to believe. Try to stop him—make him face things as they are—and the excuses and squirming, the squawking and trouble begin.

Man hates thinking—hates it like poison—hates it as a fat hog hates physical effort. He hates those who make him think. He wants to lynch them. He's so pridish, so loaded with vanity, he's almost more ready to be shot than admit he's wrong. He wants to be let alone with his nice wishes and dreams—his illusions. Every leader knows the danger of disturbing men's illusions, of trying to get them to think. Once you get men to tear off their mental blinders and think, to see clearly, action follows.

Sometimes it looks as if men will forever misrepresent and hate each other, become twisted and confused. But I have hope—hope because man has advanced, and will continue to advance in spite of himself, in spite of his blindness, his selfishness, his brutality.

Don't forget—it's only a few years since man crushed the bones of his brothers in iron boots, cut off their eyelids, jerked out their tongues, gouged out their eyes, pulled out their finger nails, tore at their quivering flesh with iron hooks and pincers, burned them at the stake, mocked their cries and groans, ravished their wives and children—and then prayed to God to finish the job in Hell.

But the Miracle of Miracles is yet to come. Man is young. He has conquered the air—the animals of the wilderness—the lightning and waters. He has diverted rivers from their course, bored holes through mountains, made lakes and dams at will. But he has yet to conquer himself—to rule himself.

Some men would love to die in a banquet chair. But banquets, dinners—all are a waste of time to me. I decline all such invitations. I don't want to help men celebrate. I want to help them accomplish.

I can almost set down this general rule: Where I am welcome, I'm not needed. Where a struggle is on

—where people dislike me because I insist on dealing with brutal facts, or where men are twisted and confused—there I should go.

The officers and agents of a local union should be required to cooperate effectively and work in harmony—if they do not already do so—regardless of their likes and dislikes for each other. Petty quarreling or quibbling should not be tolerated. When officers and agents quarrel among themselves—or when they strive for popularity or advantage over each other—the organization always suffers, dissension grows, work is neglected and the members always foot the bill for such jealousy, fighting or quarreling.

I could cite an abundance of proof of the costly effects of jealousy or quarreling among union officers. It has weakened, held back and almost destroyed some unions. It keeps them divided and upset. Any officer or agent who does not cooperate with his associates, who fails to work in harness, or whose ambitions run away with him, who cannot hold his envy or jealousy in check, should be removed at once.

It's a growing little center in Michigan. A new union was established. It was making splendid headway. Good wages and conditions were obtained. Then the usual thing happened. They thought themselves all powerful. They served an ultimatum on the employers. It could easily have been settled—but stubbornness and self-deception did the job. Now they are all shot to pieces. This is the thing we are determined to correct.

A man never knows how little he knows until he tries to put his thoughts on paper. He never knows how easy it is to be wrong until he reads his own views. It's like looking into the mirror at yourself. If one wants to find out how little he knows about a subject, try to write about it. He will then see how loose, disconnected and inaccurate his thoughts have been. He will see his best arguments are full of flaws.

If you want protection and progress you must certainly pay for it. Progress—changes and improvements—have always meant heavy cost, hardship and suffering. That's the story of man. So it was even with the bathtub. When it was introduced it was bound to "corrupt the morals of our youth and spread sickness and disease." Even Congress legislated against

the bathtub and it was in the courts again and again. But the bathtub made progress just the same—but at heavy cost.

One man puts it this way:

"No matter how hard a person or group tries to do something that may be of general benefit to those most needy of such assistance, you will always have those finding fault with what is being done and the manner of doing it. Surgical operations, as you know, are always painful and costly to the patient and often result in death, yet many lives have been saved through this 'painful process'."

A local secretary writes:

"He is new—but we think he will make the best organizer the Brotherhood has."

It's easier to hammer such men than it is to find better ones. You can't begin to realize what a job it

is to find active, capable, suitable men for such work. Just try it. Many apply—but so few are really fit. Every day since I assumed this presidency, Napoleon's words—"My God! How rare men are!"—have almost rung in my ears.

Few men will come out openly and oppose a sound, constructive measure. It's nicer to say they "favor" it in "principle." But how they squirm, twist, offer excuses and argue when it comes down to action. How they try to tear a thing to pieces by misrepresentation—although they will admit it's good in "principle," which means exactly nothing. Just try to get men to actually do something. Then comes the "ifs," "buts" and "howevers." It's the same with a man who doesn't keep faith. He can always find an excuse to break his word. Diplomats all say they favor disarmament in "principle." But try to get them to actually disarm. That's quite different.

POWER TO OFFICERS

IT'S a natural thing that unions want to handcuff and shackle their officers. Humans have always opposed power for others. That's why newly formed democracies have had so much trouble functioning. It's due not so much to previous abuses of power—but to natural envy, jealousy and narrowness.

Nothing excites more envy than power and success. There's something in human beings that hates superiority of any kind. And this slow, consuming, concealed fire of envy bars the way of many natural leaders from the heights. Certainly these truths are not popular—but they are important.

Unions have had much the same experience as the United States. After the colonies declared their independence some sort of central government was necessary to carry on the Revolutionary War. The articles of confederation, full of high-sounding phrases, were adopted. The government was created—but it had no power to raise money, troops and munitions. Each colony was supposed to make voluntary contributions.

Humans were much the same then as now. Town meetings were held. Everybody wanted to talk. Each had his ideas. Each blamed the other. Politicians bickered and interfered, while George Washington and his troops starved at Valley Forge. Suffering was intense, with great delay on all sides in getting troops, supplies, food and clothing. The Revolution was failing. The natural thing then occurred. Strong powers were then given the Federal Government.

Labor unions have been slow to change. Unions, once, the same as now, formed democracies. They

were organized so that officers were many and without power—on the theory that they could do no harm. Soon practical thinkers began to see that while no power meant no harm, it also meant no results.

Corporations adopted the opposite policy. They held few meetings. They picked capable executives and then gave them large powers. Labor unions, both local and International, must do likewise if they are to cope with such corporations. There must be centralization of authority in fewer officers. There must be no divided authority.

Early I learned that while power is sometimes abused, there are positively greater abuses and dangers under the old, loose way unions have been operated. I doubt if any system could be worse. Hamstrung officers can do no harm—neither can they get things done. Time has brushed aside all theory. The truth stands out, whether we like it or not.

A year ago I wrote:

"Unions must discard most of their worn-out machinery and methods of doing business, revamp their laws, untie the hands of their officers, allow them to be executives instead of errand boys, and get rid of drunks, liars and tricksters. They must turn loose their horses, junk their buggies, throw away their banners and placards, forget petty phrases and slogans, refuse to allow their meetings to be made a playground for sentimentalists, idealists, ladder climbers, and the so-called lovers of democracy."

H. H. Broach



G. M. BUGNIAZET
International Secretary
International Brotherhood of Electrical Workers
Selected at
Atlantic City
to be
EIGHTH VICE PRESIDENT
AMERICAN FEDERATION OF LABOR



An Exhibit at Illinois State Fair



International Brotherhood of Electrical Workers

Who? What? Where? Why?

Beginnings ~

Born almost simultaneously with electrical industry. ~ ~ ~
Founded St. Louis — 1891.

Making America ~

For a generation ~ has erected and manned telegraph, telephone, power and construction jobs of national dimensions in the United States, ~ Panama, Canada ~

Range ~

Wires dwellings, skyscrapers; builds high tension telephone and power lines; operates electric locomotives and cranes; installs refrigerators, radio, movietone, dictaphone, fire and burglar alarms; tests meters and batteries; operates switchboards; wires telephone bells, fans, and every known household convenience. Numbers electricians, linemen, cable-splitters, electric central station operators, telephone operators, stage illuminators, and many other craftsmen engaged in the installation, maintenance, and repair of electrical devices, among its members.

The Skyscrapers of the Future will be wired by Brotherhood men.



Modernity ~

Now an essential factor in developing water power ~ radio, television ~ movietone and every other advanced form of electrical enterprise.



Service ~

Believes in service. Puts thousands of young men to school every year to insure technical quality of electrical work. Operates 'post graduate' electrical courses in principal cities.

Cooperation ~

A pioneer in cooperative industrial relations. Believes strikes are antiquated means of settling industrial disputes. Has rational relations with enlightened employers in every community in U.S. and Canada.

Leadership ~

Owens and operates illustrated magazine read by students of unions in principal countries of world.

Fraternal ~

1. Pays pension of \$42 a month to its elderly members.
2. Insures every member in good standing for \$1,000.
3. Insures under group insurance, thousands of members for \$3,000 additional, with generous disability features.
4. Pays large relief sums.

Why? ~

Cooperation is the law of industrial civilization. A labor union is a natural form of cooperation essential to moral, economic and spiritual evolution of our industrial civilization.

Ready-Made Homes Not So Cheap As They Look

WILL mass production houses provide the homes of the future? While most consumers of housing will agree with Alvin Dodd, assistant to the president of Sears, Roebuck and Co. when he urged the desirability of this type of building for the sake of cheapness, there are other factors to be considered. Mere cheapness is not the first concern in an investment the cost of which is to be spread over a period of years, and a home is not like an automobile, to be replaced frequently. Mass production in the automobile industry makes it possible to offer a better car than could be offered for the same price by single production; but the added cost of a custom-built car is far greater proportionately than the extra cost of a home built to individual plans, over that built by mass production.

It is not denied that some of the big national organizations specializing in ready-cut houses have an alluring proposition for the bewildered home-seeker, when charges of 20 to 25 per cent (in some cities) on second mortgages glare in his face, and bankers display a dampening lack of enthusiasm for new construction loans, and other agencies for dispensing low-cost financing are walking backwards in cautious conservatism.

Several of the ready-cut house corporations offer extensive financing to purchasers of their product. If the buyer has his lot paid for, they will assume almost the entire burden of financing the building, with a long-time, amortizing loan plan. They will provide plans, send materials down to the last nail and screw, recommend contractors, inspect the building as it goes up and provide money as it is due. In addition to the interest and fees on the loan they make a profit on the material, yet because of their mass production methods and enormous volume of business, no speculative builder can compete with them on price, in their field. The consumer does not get the house he would have had if he had been able to indulge his individual taste, with the guidance of a competent architect; but he gets a house at the cheapest possible price. This in spite of large financing fees, which in some cases run to 15 per cent.

Like Jig-Saw Puzzles

Not surprising, is it, that mass production houses become an increasing menace to skilled labor, contractors, and architects engaged in small house planning and building?

Skill is something the mass production house is intended to make unnecessary. The man who knows how to frame a hip roof may sell his services elsewhere, if he can: framing members come already cut and numbered. They are assembled like a gigantic jig-saw puzzle. Many other parts of the house come already cut, and in some cases, assembled. The plumber does not have to cut or thread a pipe, this is done for him at the factory and part of the skill necessary to his trade eliminated. Electrical fixtures come assembled. While it is not true that these houses can be put up by handy-men, the buyer is led to believe that so much of the skill has been eliminated that the greenest of

Mass production houses, which are being urged during hard times, as a solution for the housing problem, omit services of banker, architect, contractor and skilled craftsman. Not so cheap as they appear, and eliminate all individuality. Yet they do enable hungry house-owner to finance himself—though at exorbitant interest rates.

tradesmen can successfully put the building together. This frequently leads to dire results for the owner; but the fact remains for union building tradesmen's contemplation that high-type union craftsmanship is not generally desired on these structures. A large amount of work is swallowed up by these ready-cut homes corporations, at least one of which is notoriously anti-union. And dangerous inroads are being made by factory machines upon the craftsman's skill.

The builder, in his turn, finds his margin of profit pared so small that an established contractor can scarcely afford to take on the job. The brains and business experience of the general contractor are rendered as unnecessary as the tradesman's skill. He does not have to figure or buy material on the job, and this source of profit is cut off; and problems of construction have been solved for him. The house has to be built in a certain way, and all the contractor has to do is to see that the pieces of the puzzle go in as they are intended to. When the bids are let, the general contractor is generally out of the picture, and non-union builders, working with their tools, are taking the sub-contract on each trade.

Architects Out

The architect, too, is out of a job. His years of education count for as little as the sagacity and experience of the contractor. It is true that members of the American Institute of Architects are employed to draw plans for mass-production houses, but instead of being able to draw a plan for a particular house, for a certain

locality and type of lot, to suit the individual tastes of a certain owner and his family, they must sit down and draw A HOUSE—any house, that can be dumped down anywhere. The plan must be as average as a census tabulation and may have about as much art. And the brilliant young architect who could have drawn plans for a house that would have been a joy forever finds his opportunities tragically cut off.

Thus factory-made houses are wiping out jobs—the brain-and-skill jobs of small house construction. Instead of the profits of building being distributed in the community, they go to the corporation. These are economic sins, in building as well as in store-keeping, and if chain stores are indicted by the public on these counts, house-factories are equally blame-worthy. There is an artistic crime, as well, in foisting on buyers a standardized, machine-cut article, destroying originality and taste, in a field that is one of the last refuges of the hand crafts.

Union labor was blamed, recently, by a Wall Street newspaper, for the high cost of home building. But the wage-earner is a piker compared to the banker. All too frequently the deciding factor in the purchaser's decision to take a ready-cut house rather than an individually built house is the fact that with the former he can get complete financing without ruinous fees. The average citizen's margin between income and expenditures is so small that he despairs of being able to save up one-third of the cost of his home project, the proportion he would need to be able to deal with a building and loan society; and he shrinks from the society of second-mortgage gougers. Like the child in the fairy tale, he runs away from the gleaming fangs of the wolf and into the gingerbread house where the witch will fatten him up and lull his fears while she keeps the oven hot to receive him.

Bankers at Fault

The failure of financing agencies to take care of home builders at reasonable rates was named by President Hoover as one of the main problems to be discussed at a White House conference on the problems of home building and ownership, which President William Green of the A. F. of L. is to attend, representing labor.

"One of the important questions is finance," Mr. Hoover said. "The present depression has given emphasis to the fact that the credit system in home building is not as soundly organized as other branches of credit. Commerce, industry, installment buying and to a large extent farm mortgages, all have more effective financial reserves. There have been months during this depression when shortage of capital available for home building purposes has been so acute that this branch of construction has fallen off greatly, while other forms of credit have been available throughout the depression.

"In order to enable the purchase of homes on what amounts to the installment plan, it is necessary to place first, and often enough, second mortgages. The building and loan asso-



HOUSES LIKE THIS ARE NOT BUILT BY MAIL. THEY ARE THE PRODUCT OF SKILL AND TALENT SPECIALIZED.

(Continued on page 536)

Boston Credit Union Proves Boon in Depression

By WILLIAM F. SHEEHAN, President Electrical Workers Credit Union

LOCAL No. 103, of Boston, believes it has taken a step in the right direction by forming a credit union of its own. A credit union is one way for a labor organization to solve one of the most troublesome problems it faces, namely, financial dependence among its members.

The object of a credit union is wholly co-operative, being organized solely for the promotion of thrift among its members by the accumulation of their savings in small amounts and the loaning of such accumulations to its members only, for provident purposes, at a moderate rate of interest.

Membership in the credit union is limited to members of this local who are not affiliated with any other credit union. Applicants for membership must be recommended by a member of the board of directors. A person becomes a member by being accepted by the directors, paying an entrance fee of 25 cents and by buying one full share in the credit union.

Shares are \$5 each and may be purchased by paying cash or by paying a small deposit and weekly or monthly payments on the balance. Shares may be bought up to the amount of \$2,000. Shares may be withdrawn at any time. Members are not obliged to purchase more than one share.

Loans Are Flexible

A pass book similar to a bank book is issued to each member and all transactions are recorded in this book. This pass book contains columns for shares, interest, loans, fines, etc. Pass books are verified each year to check on all records.

A member in good standing in the credit union may make application for a loan. This application is acted on by the credit committee and, if granted, a check for the amount is given to the member. Loans are repaid in small weekly payments, the amount of which is agreed upon by the member and the credit committee and is recorded as part of the loan note. A small interest charge is paid by the member on the granting of the loan. Loans of \$100 or less may be granted without security or without endorsers. Loans of over \$100 must be signed by one or more endorser. If the member fails to meet his payments the endorser can be called on to do so. The state laws are rigid on this point.

The business of the credit union is carried on by a board of directors. The board has 11 members who are elected by all shareholders at a general meeting. The board elects all the officers of the credit union from among its own members.

The books are audited monthly by auditors of the credit union and at least once each year by the bank commissioner of the state. Reports of financial standing and business transacted must be reported every six months on forms supplied by the state.

The money accumulated by entrance fees and a portion of the interest money is put in a reserve fund to take care of bad notes and any other losses which may occur. After expenses are deducted the rest may be paid to the shareholders in the form of interest on dividends. Credit unions average a good rate of interest on shares.

Credit union laws have been enacted in most states and the laws are similar in the majority of these states. These laws govern the conduct of the officers and set up standards that must be met. These laws are

Unions cannot end depression and attendant unemployment, but they can meet these disasters by co-operation. How Local No. 103 has weathered the storm is here told by a moving figure in the enterprise.

very fair and although they seem to cause much red tape to organizing and conducting business they have proven beneficial in most cases.

Meets Every Request

During the period of unemployment the members of Local No. 103 who joined the credit union found it to be very helpful. The officers of the credit union and the local union worked hard to interest working members in the plan in the hope that the funds from this type of member would be available to help the less fortunate Brothers. This proved to be sound business as the credit union was able to meet every request for a loan and was able to keep the reserve fund intact. Forty-three members were granted loans varying in amount from \$30 to \$100. These members have been the best agents and have spread the story of the credit union to many.

Members who were not able to meet the payments on their short term notes because of continued unemployment were granted extensions of time on their notes, at the same rate of interest. No exorbitant renewal charges or fines are levied as is the case with the professional loan sharks. Because of the understanding of conditions which existed, no pressure has been placed on any member carrying an overdue note. Members have been prompt in paying whenever conditions were favorable.

Strictly Confidential

The feature of dealing with men of your own trade and circumstance has been a great selling point. All transactions are strictly confidential and no public notice is needed or given. No outside interests, which might be more interested in making money than helping worthy members, are connected with credit unions.

Information concerning the organizing or operating of a credit union may be obtained by communicating with the Credit Union League, 5 Park Square, Boston, Mass. This office is maintained to help credit unions and all advice and information are given without a charge of any kind.

Local No. 103 feels proud of its credit union and is certain that it will grow to be one of the best of many good features connected with this local.

Wine District Noted For Long Lives

The argument that the habit of drinking wine conduces to a long life, as well, perhaps, as a happy one, is revived in a recent announcement from the agricultural and meteorological section of the Astronomical

Observatory at Lyons, France. Interested by newspaper reports last year that the district of Médoc, in France, long famous for the soundness and cheapness of its local wines, also was famous for people who had reached very advanced ages, the statisticians of the observatory have computed the average percentages of persons more than 60 years old in several typical regions of France. The longevity of Médoc denizens is reported as confirmed. Numerical percentages mean little because of the many factors that affect the problem and many uncertainties in the figures. It is believed to be unquestionable, however, that old people are definitely more plentiful in this famous wine country than in other regions not so noted for wines or for temperate wine drinking. There are possibilities, it is admitted, that other factors may be operating to bring about this same result; an especially healthy peasant stock, for example, unusually good food, favorable weather, perhaps others. French physiologists maintain, however, that the moderate, regular drinking of good wine provides the body with mineral salts, vitamine materials and other similar benefits less likely to be obtained in other ways, so that the exceptional chance of long life enjoyed by the Médoc wine drinkers may be due in part to that habit as well as to weather, food or other circumstances.

Man Has Hand For Grasping; Woman For Picking Up

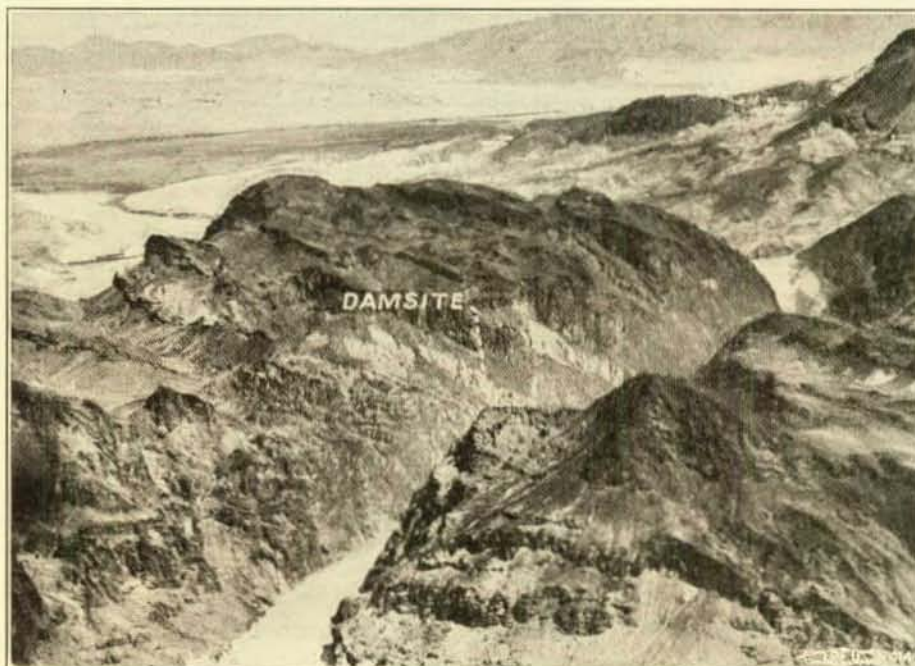
The curious fact that the first finger of a woman's hand is almost always longer than her third or "ring" finger, while the first finger of a man's hand is likely to be shorter, has been confirmed by Mr. Ruggles George, of the University of Toronto, and is reported by the Wistar Institute Bibliographic Service of Philadelphia. The result was obtained, Mr. George reports, by examining 630 hands of white adults in North America. There is no difference between right hands and left hands in this particular; both feminine hands tending to have long first fingers while both masculine hands have long third ones. Mr. George's announcement does not commit him to any theory of the cause of this curious difference, although some cause must exist in differing activities or heredities of the two sexes. It is tempting to consider the difference a result of different habits of men and women in savage times or in the still more, ancient period when mankind was evolving slowly out of ape-like creatures. Under such savage or pre-human conditions the male hand probably was used most importantly for grasping something; perhaps the limb of a tree or the handle of a weapon. Such use might be expected to strengthen and lengthen the third finger, which is at the center of the grasp. Under the same social conditions women, it is probable, had much less need to grasp things but greater need to handle small and delicate things, like picking seeds from the ground or out of a seed pot or handling small domestic tools like pins or needles. Thus the first finger, which is used chiefly for such things, got more exercise from its feminine owners and grew correspondingly longer.

Boulder Dam, Six Engineering Projects in One

By **RAYMOND F. WALTER**, Chief Engineer, U. S. Bureau of Reclamation, Denver

A RAILROAD 30 miles long, a town capable of housing 3,500 workers, an incline railroad, the highest dam in the world, tunnels through solid rock for water diversion, great power houses—these describe the immensity and variousness of the Boulder Dam project, preliminary contracts for which are to be let this month. The ELECTRICAL WORKERS JOURNAL is in-

So great and so various are the problems attendant on building the government dam in the Colorado river, that some of them are still unsolved.



THE RUGGED CHARACTER OF THE CANYON DISPLAYED. THE TOWN IS TO BE ERECTED ON THE BLUFF TO THE LEFT.

debted to Raymond F. Walter, chief engineer, U. S. Bureau of Reclamation, for the following analysis:

What Is Known of the River's Flow

Water Supply—Discharges of the Colorado River have been recorded at Yuma since 1902, at Topock since 1918, at Grand Canyon since 1923 and at Lees Ferry since 1921, all stations being operated by the U. S. Geological Survey except the Yuma station, which was operated by the Bureau of Reclamation prior to 1928. Records of varying length are available for points on the main streams in the upper basin since 1895. From these data estimates have been prepared of the flow to Colorado River at Boulder Canyon for the 33-year period from 1897 to 1929, inclusive, and with upstream development as of years 1938 and 1988, these being the assumed years of completion of dam and power plant and the end of the 50-year repayment period contemplated in the Boulder Canyon project act. The following tabulation gives some general information regarding the annual use and flow of water:

	Original Condition	Condition as of 1938	Condition as of 1988
Upstream irrigated area, acres.....	0	2,040,000	3,368,000
Water used by upstream irrigation, acre-ft.....	0	3,061,000	5,052,000
Transmountain diversions, acre-ft.....	0	180,000	621,000
Reservoir evaporation, acre-ft.....	0	240,000	920,000
Total depletion, acre-ft.....	0	3,481,000	6,593,000
Average flow at Boulder Canyon, 1897-1928, acre-ft.....	18,400,000	*15,000,000	*11,895,000

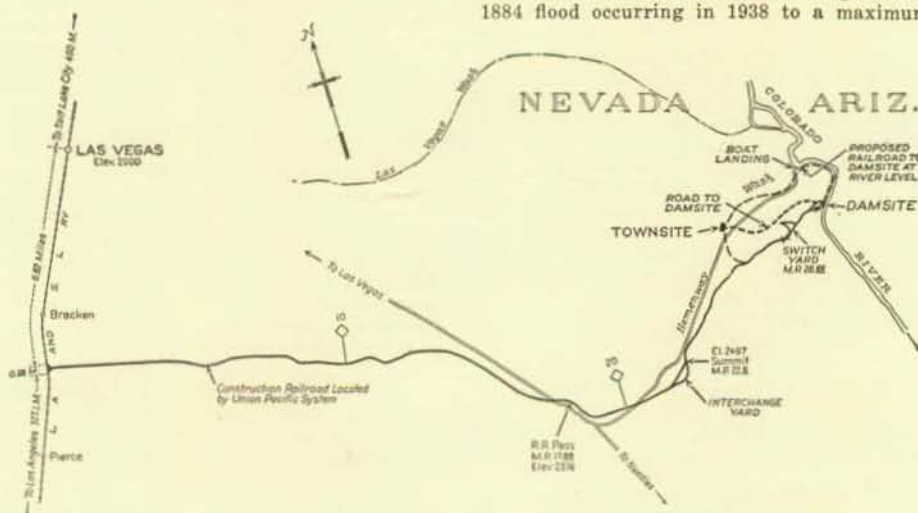
*Evaporation from Boulder Canyon reservoir, averaging 600,000 acre-ft., not deducted.

The Colorado River compact provides for an ultimate upper states depletion of 7,500,000 acre-ft. annually, less such allotment as may subsequently be made to Mexico out of the upper basin allocation. The ultimate depletion will therefore be greater than that of 1988, but since the project will be paid out that year the ultimate depletion is not of material interest at this time.

The Flood Problem

Flood Control—The storage required for flood control in order to reduce maximum river discharge to amounts which can be safely passed through the delta region has been based on the 1884 flood, the discharge of which has been estimated from a considerable mass of unrelated data consisting of reports of old residents, newspaper accounts, observations made during the construction of the Santa Fe Railroad bridge at Needles, and so forth. As a result of these researches the total flow of the Colorado River for the period from April to July, 1884, has been estimated at 30,000,000 acre-ft., a total 60 per cent greater than any flood occurring since that time. The maximum daily discharge for the 1884 flood has been estimated at 250,000 sec.-ft., which is but little higher than the corresponding maximum during the 1921 flood. Under 1938 conditions, the comparable total flow of the 1884 flood would be 25,500,000 acre-ft.

Flood estimates, based on studies of the relation between accumulated precipitation and flood flow, show that a part of the power storage can be used for flood-control purposes and that a considerable portion of the flood-control storage can be used for power production without material encroachment on the primary function of either. On this basis a storage reservation of 9,000,000 acre-ft. for flood-control purposes would reduce the maximum rate of discharge of an 1884 flood occurring in 1938 to a maximum



BUILDING A RAILROAD FROM LAS VEGAS, NEV., WILL BE THE FIRST ITEM OF CONSTRUCTION

reservoir outflow of 75,000 sec.-ft. without overtopping the dam, even though the reservoir was at flood level at the beginning of the year. Irrigation diversions and river loss would reduce this maximum flow to approximately 60,000 sec.-ft. in the delta region. On the same basis the highest flood since 1902 would be reduced to a maximum flow of about 30,000 sec.-ft. through the delta.

How the Storage Will Be Used

Irrigation and Power Storage—Estimates of annual streamflow at Boulder dam, with 1938 development and with runoff conditions similar to those of the period from 1896 to 1928, show the necessity for a large storage capacity in order to provide a comparatively uniform outflow suitable for irrigation and power requirements. Firm power output is controlled by conditions for a short period ending in 1904, at which time storage is depleted to the minimum compatible with allowable shortage of power and maximum power output over a series of years. The following table shows the derived results for conditions as of 1938 for three different heights of dam being tentatively studied at the present time:—(See table below.)

Similar computations have not yet been completed for the conditions that will exist in 1988. At that time upstream depletion will result in less water for power development and decreased capacity required for flood control. Impounded silt will cause a reduction in total storage capacity. Power

Elevation at top of dam	1,207	1,225	1,232
Maximum water surface elevation	1,204	1,222	1,229
Raise in water surface, ft.	557	575	582
Reservoir capacity, acre-ft.	27,000,000	29,500,000	30,500,000
Flood-control reservoir, acre-ft.	9,500,000	9,500,000	9,500,000
Capacity for irrigation, power, and silt, acre-ft.	17,500,000	20,000,000	21,000,000
Continuous firm power output, hp.*	610,000	650,000	665,000
Assumed installation, 65 per cent load factor for firm power, hp.	940,000	1,000,000	1,025,000
Computed mean power output, 1897 to 1929, hp.	837,000	884,000	900,000

*83 per cent plant efficiency and 10 per cent maximum shortage.

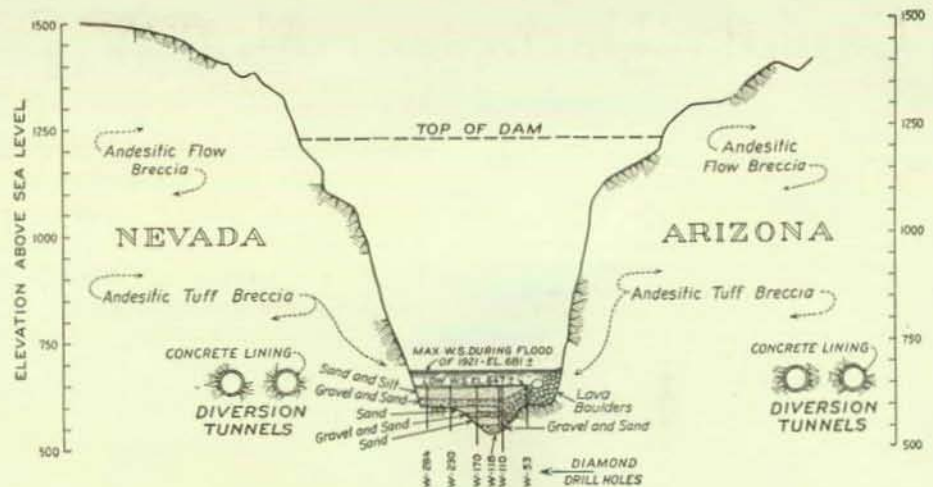
and irrigation dams at the Bulls Head and Parker sites, below Black Canyon, if built by that time, will regulate the outflow from the Boulder Canyon reservoir, thus leaving the Boulder Canyon project free to be operated primarily for power production, subject only to certain restrictions which will preclude the waste of waters that might be needed for irrigation purposes.

In view of the uncertainties in the discharge records, the effect of upstream depletion and reservoir silting and the possible occurrence of extended periods of low runoff with average flows less than those prevailing in the past 33 years, the financial set-up of the project must be based on a firm power output materially less than the indicated available firm power as of 1938. Consequently, firm power equivalent to 550,000 hp. continuous output is being considered.

Silt storage—The Colorado River Board

adopted 137,000 acre-ft. per annum as the best estimate of the rate of silt inflow to the reservoir. With the construction of upstream reservoirs, the quantity of silt reaching Boulder Canyon will be materially reduced. The Bridge Canyon dam, when built, will intercept the greater part of the present silt flow. It is estimated that the total silt deposits will not exceed 3,000,000 acre-ft. at the end of the 50-year repayment period, and such a deposition is being considered in the set-up. Deposits occurring after the end of the repayment period are not considered of immediate concern.

Boulder Canyon Reservoir—The reservoir formed by the proposed dam will be more than 100 miles long and will be the largest artificial body of water in the world. The greater part of the storage will be obtained in the valleys of the Virgin River and Las Vegas Wash on the Nevada side and in the



PROFILE AT DAMSITE, LOOKING UPSTREAM

More than a hundred feet of excavation required to reach rock foundation.

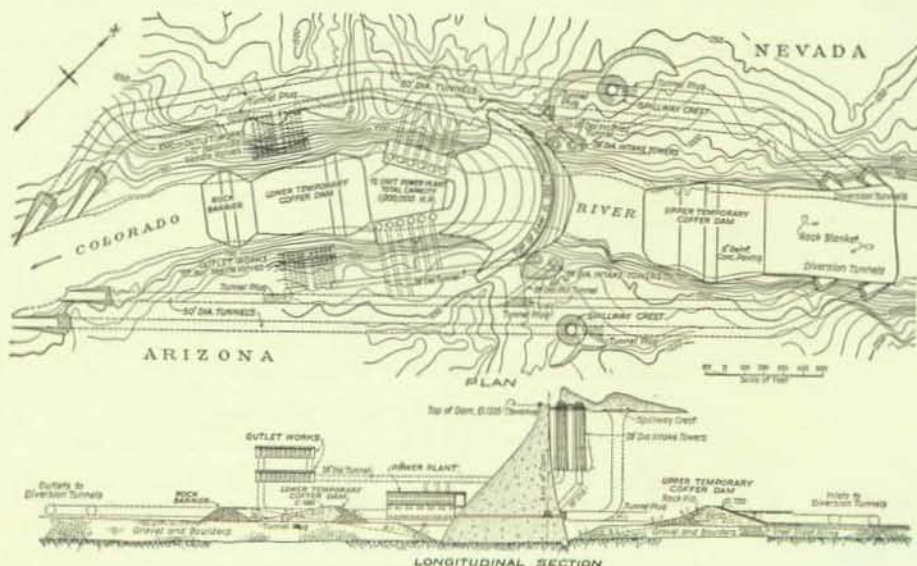
Detrital Valley on the Arizona side. The upper end of the reservoir is a narrow canyon having comparatively little storage space. The major portion of the reservoir is a hilly basin of hard rock floored chiefly by gypsiferous silty beds of the Muddy Creek formation and to a less extent by coarser detrital deposits of the same or younger age. There is no evidence of the existence of any porous rock formations through which water might escape. Near the damsite the rock dips generally in a northeasterly direction away from the site so that the chance of leakage is small, since the water would have to find its way not merely between but across the rock flows. Thus it may be concluded that the reservoir will have no appreciable leakage.

Dimensions of the Dam

Damsite—The proposed dam will be located in Black Canyon about 25 miles southeast of Las Vegas, Nev., Black Canyon being about 20 miles downstream from Boulder Canyon. The site adopted is about 1½ miles below the upper end of the canyon. The rock formations in Black Canyon are volcanic flows and tuff-breccias, primarily of andesitic composition; the material exposed in the canyon walls, from the upper end to a point at least a quarter of a mile below the damsite, is mainly andesitic tuff-breccia. Although the formation is somewhat jointed, the rock is well cemented, tough, durable, impervious, and an excellent material for tunneling as well as for the foundations and abutments of a high dam. Some faults are exposed on the canyon walls near the damsite, but none of them shows any evidence of recent movement. Undisturbed potholes, crossed by faults, exist on the Arizona side, about 900 ft. above the river, thus indicating no movement along the faults during the period in which the river channel was lowered 900 ft. by erosion. These faults are not located so as to impair the safety of a high dam.

Boulder Dam—Boulder dam will be more than 700 feet high and will contain approximately three and one-half million cubic yards of concrete, of which about half a million yards will be below low-water surface, the lowest point of the base being approximately 125 feet below low water. After the river is diverted and the foundation and abutment excavation is completed, the construction problem will be simply a huge mass-concrete manufacturing job, probably the largest ever undertaken, considering the vertical height and limited

(Continued on page 540)



PLANS FOR BUILDING BOULDER DAM INVOLVE EARTH-FILL COFFERDAMS AND FOUR DIVERSION TUNNELS

Canada Harnesses Mighty Seven Sister Falls

By R. G. IRVINE, Press Secretary, L. U. No. 1037

ON the borders of Manitoba and Ontario, and part of the northern boundary of Minnesota, lies a series of fresh water lakes known as the Lake of the Woods. At their northwest corner emerges the overflow, the Winnipeg River. A country of solid rock, muskeg, lakes and bushland, mostly jack pine, spruce and poplar stretches away to the north and west, wild and untamed, as the great glacier receded to the frozen north in an age long past.

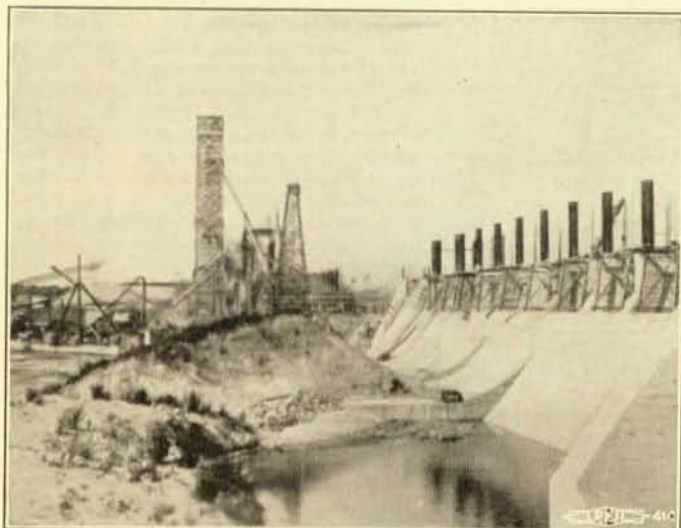
For hundreds of years this turbulent river has spent its forces wearing holes in rocks and rushing on its way to empty its waters into Lake Winnipeg, and thence by the equally turbulent Nelson River to the Hudson Bay and the great Arctic Ocean. Over 20 years ago commenced the first harnessing of this power for the uses of man, followed through the succeeding years to the greatest development of them all, the Seven Sister Falls, a series of seven rapids all within a few miles.

Rich In Electric Energy

This \$25,000,000 project to develop 225,000 horsepower will require four years to complete, one and one-half years having already been spent, and employing the year around between 1,100 and 1,200 men. The plant, when completed, will be composed of six units of 37,500 horsepower each with an initial installation of three units.

The Northwestern Power Corporation, a subsidiary of the Winnipeg Electric Corporation are the sponsors of this undertaking and will add materially to the industrial requirements of Winnipeg and the province.

The dam complete will create a reservoir overlapping all the seven falls and the volume of water confined can be left to the imagination. The huge pile of rock with the locomotive and cars on top is all waste, blasted from the solid rock of the river bed. The pile of concrete with the steel structure on top is the spillway, while the coffer dam in the lower center will eventually be the power house. The huge tower, over 600 feet high, is only a temporary structure, inside of which is hoisted the raw concrete, and thence run by gravity to the various points to which it is required.



A FOUR-YEAR PROJECT THAT WILL YIELD UNTOLD RICHES IN ELECTRIC POWER

All over the American continent water power projects are being pushed with swift dispatch. Here is a sketch of Winnipeg's great power development.

Carter, Halls and Aldinger, of Winnipeg, are the contractors and the I. B. E. W. is actively employed.

HOW TO TREAT SUNSTROKE

Many lives might be saved this summer, says Dr. C. O. Sappington, director of the Division of Industrial Health of the National Safety Council of Chicago, if everyone knew how to recognize the symptoms of sunstroke and what to do for the victim until the expert aid of a physician can be obtained. "There is no time for indecision," Dr. Sappington writes in the council's periodical leaflet, "The Safe Worker," "when sunstroke attacks a person." Life may hinge on whether someone who is about knows the correct treatment. The symptoms of sunstroke as distinct from fainting or other loss of consciousness. Dr. Sappington describes as "pains in the head, hot and dry skin, no perspiration, labored and feeble breathing." When someone collapses with these symptoms, he writes, "send for a doctor at once and then do everything possible to reduce the victim's temperature. Get him to a cool place, remove his clothes, apply cold water to his face, neck, chest and arm-pits. Better still, put him in a very cold bath or wrap him in sheets wrung out of cold water. Then keep these sheets wet and cold with more water or ice. Keep rubbing his body continually to prevent shock. When consciousness returns let him drink all the cold water he wants. Don't give him stimulants at any time." To remember these simple procedures for treatment, as well as the warning symptoms that a sunstroke is coming on or has occurred, may save numerous victims, the Chicago health expert suggests, during the heat waves which still must be expected during September.



WASTE BLASTED FROM SOLID ROCK IN PROCESS OF FORWARDING THE GIANT PROJECT

SUMMER'S SUN 15 TIMES BETTER

Ten minutes of summer sunshine at Little Rock, Ark., is more than the equivalent so far as health value is concerned of two and one-half hours of sunshine in January or February. So Mr. Paul L. Day reported to the recent meeting of the American Chemical Society, in Atlanta, Ga. One of the chief effects of sunlight on the bodies of animals is to create in them the so-called Vitamine D, lack of which causes the disease called rickets. To test for the presence of this vitamine or to test sunlight or the rays of artificial ultraviolet lamps for

their potency in creating the vitamine and preventing this disease, biologists commonly use white rats kept on a diet otherwise sufficient but which lacks the vitamine in question. Under these conditions rats soon develop signs of rickets. A small amount of the vitamine or of sunshine will operate, however, to "protect" the animals from the disease. Such rats, fed none of the vitamine but exposed to 10 minutes of sunshine each day in June and July, 1929, were thus protected, Mr. Day reports, from the disease. Similar rats given two-and-one-half-hour daily doses of sunshine between January 4 and February 14, 1930, were protected only imperfectly, indicating that this amount of winter sunshine at Little Rock contains too small an amount of ultraviolet rays to replace the necessary Vitamine D in the food. The reason for this enormous difference between the sunshine of summer and of winter is due, experts believe, to the fact that the sun does not rise so high in the sky in winter so that the winter sunlight is filtered through a greater thickness of air and to the further fact that more household fires are burning in winter so that the air is contaminated with smoke.

There is quite as much education and true learning in the analysis of an ear of corn as in the analysis of a complex sentence; ability to analyze clover and alfalfa roots savors of quite as much culture as does the study of the Latin and Greek roots.—O. H. Benson.

New England Falls Outdoes Niagara in Power

SWIFT, turbulent rivers fed by mountain snows, turned wheels, that made old New England supreme in many manufacturing towns. That leadership lost, the Northeast seeks recovery in reharnessing the same rivers to produce abundant, cheap, hydro-electric power. One of these developments in the upper Connecticut River, not far from where it rises in White Mountains, near Littleton, N. H., is said to produce more power than the world-famous development in Ontario on the Niagara River. This development, by the Grafton Power Company, is part of the New England Power Association pool. This association dominates, as a holding company, about 26 of the principal operating firms in New England, and is affiliated with the International Hydro-Electric system, which reaches into Canada.

The Grafton Power Company describes the Fifteen Mile Falls Development:

The Fifteen Mile Falls are on a portion of the Connecticut River about 20 miles long, throughout which stretch the river drops 320 feet. This fall is very rapid for 15 miles—hence the name.

This section of "white water" has been an attractive source of potential power and the subject of engineering study for many years.

The march of events in the electrical development of New England water-powers and the ever-increasing demand for electrical energy now make the Fifteen Mile Falls Development an important addition to the New England Power Association's hydro-electric properties.

After intensive study by engineers of the New England Power Association and eminent geologists and consulting engineers, it was decided to develop the Fifteen Mile Falls by building two dams each about 175 feet high. To assist in regulating the flow from these plants, a third dam about 30 feet high and now under construction, has been located at McIndoes Falls about seven miles downstream from the Fifteen Mile Falls Lower Development. Power houses adjacent to these dams will develop a total of 350,000 horsepower.

Surplus Above State Uses

The output of these power houses will be available for the local power requirements of New Hampshire and Vermont and the remainder will be transmitted over lines connecting with the New England Power Association System.

Careful investigation of the geology at the chosen sites has established the feasibility of the designs and the adequacy of the supporting bedrock. Plentiful supplies of suitable sand and rock for concrete materials are conveniently located and ample deposits for earth dam construction are found at each of the Fifteen Mile Falls locations.

The lower dam creates a lake eight miles in length. The upper dam, planned to be built at the headwaters of the lower reservoir, will form a second lake 12 miles long. The combined capacity of these two artificial lakes will be over ninety-one billion gallons. The area of these two lakes will be slightly larger than that of Lake Sunapee.

The first step in the construction program was the building of four miles of standard gauge railroad connecting the site of the Lower Development and the rock quarry above it with the Canadian Pacific Railway at Inwood, Vt. A siding from this railroad has been carried across the top of the dam to provide access to the lower plant. Work was started on the lower development the latter part of August, 1928, and is now nearing completion.

Fifteen-Mile Falls development will be fed into power pool of New England Power Association. This enterprise part of plan to reclaim New England's manufacturing leadership.

The Fifteen Mile Falls Lower Development is located on the Connecticut River in the towns of Monroe, N. H., and Barnet, Vt., about a mile and three-quarters above the mouth of the Passumpsic River.

At this point directly at the foot of the falls the dam is being constructed. It consists of an earth dike on the New Hampshire bank of the river, a mass concrete retaining wall extending upstream and downstream along the New Hampshire side of the river channel, and a concrete non-overflow section of dam extending across the river to the Vermont shore. The spillway is located on the Vermont side of the river and is 850 feet long, varying in height from 20 to 85 feet.

During the construction period the river was diverted past the site and the flow handled through a channel excavated in the ledge on the Vermont side. To provide this diversion channel it was necessary to excavate some 60,000 cubic yards of rock. Upon the completion of the dam 2,300 cubic yards of concrete will seal this channel.

High Barrier

The concrete retaining wall extends 500 feet upstream and 395 feet downstream from the center of the dam. This wall is founded on bedrock. It is 170 feet high at its mid-section and contains some 90,000 cubic yards of concrete.

The intake section of the dam through which water will pass from pond to power house extends across the river from the retaining wall and is provided with racks equipped with a mechanical rake for trash removal. Water will pass into the scroll cases of the turbines through four steel plate penstocks 19 feet in diameter.

The penstocks are 150 feet long and each weighs in the neighborhood of 190 tons. The intake gates are located at the upper end of the penstocks and the pivot type turbine inlet valves are located at the lower end.

The power house substructure is of mass concrete and contains the four vertical water wheels, draft tubes and auxiliary operating mechanisms.

To provide for draft tubes through which the water passes after leaving the turbines the power house substructure was carried 35 feet below the river bed.

The power house superstructure is of steel frame, brick construction. The main building is 236 feet long and 99 feet wide. The generator room contains the four vertical type generators which are directly connected to the water wheels. Two 115-ton electric cranes for operating these machines are provided.

The switchboard room from which the plant is operated is located in a gallery upstream from the generator room. An elevator will give access to the power house. The transformers are located outside the main building on top of the intake structure.

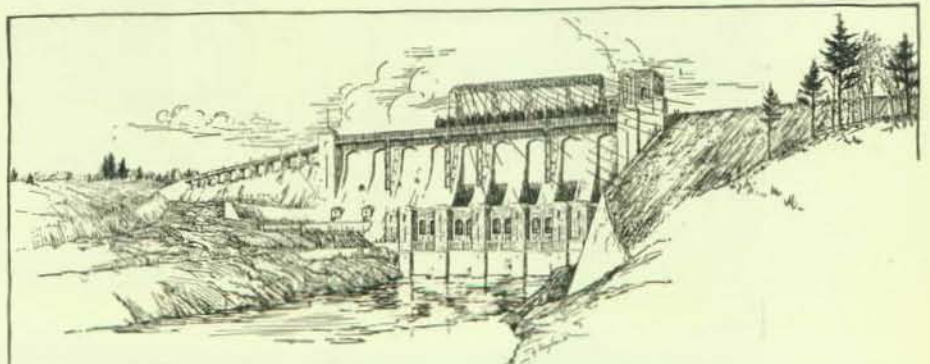
The electrical energy, which will be generated at 13,800 volts, will be stepped up to 66,000 volts for local distribution, and to 220,000 volts for long distance transmission.

The outdoor switching stations are located on the New Hampshire hillside. These switching stations are one of the terminals of the high tension line tying this plant to the New England Power Association system's distributing network. The lines from McIndoes Falls and Fifteen Mile Falls Upper Development will also be brought into these stations, as well as lines connecting with local power consumers.

The McIndoes Falls Development consists of a concrete dam 680 feet long. The spillway and gate section of the dam is 520 feet long and the power house section is 160 feet long. These structures are founded on ledge and located in the bed of the river.

The intake and power house substructure will be built of reinforced concrete and the water intakes and scroll cases will be of concrete. The power house superstructure will be of steel frame, brick construction. The power house will contain four umbrella-type generators with direct connected exciters driven by propeller-type turbines. Two of the turbines will have fixed blades and two will have blades adjustable through the governor mechanism. The electrical energy will be stepped up for transmission by a bank of transformers located outside the power house on the downstream side of the generator floor level. The normal capacity of the plant is 12,500 horsepower.

The New England Power Construction Company provides the designing engineers. The Connecticut River Development Company is handling the construction work, assisted by the Fraser-Brace Engineering Company, Incorporated, which is furnishing part of the construction equipment and personnel.



A SKETCH OF ONE SECTION OF THIS GREAT HYDRO DEVELOPMENT.

Non-Union Workers Take Many Wage Slashes

DR. EDWIN F. GAY, Professor of Economic History, Harvard University, told an audience of international distinction at Williamstown in August that there were two roads to economic well-being for workers. The first is for labor to exercise influence upon government. The second is for labor to establish on a national scale, "the new theory and practice of the economy of high wages." Dr. Gay, who is recognized as a disinterested thinker, was discussing the long drift downward of price levels—a process which has been going forward the world over for the last five years. It is this decline of prices, it is believed, that is responsible for a world depression, for unemployment, and for the intensity of the present depression in the United States. It is Dr. Gay's opinion that the policy of American labor of seeking to democratize wealth through high wage economy "is likely to be adopted more widely in other countries."

In the meantime, many employers who directly or indirectly promised the President of the United States that wages would not be cut during the present depression have violated the agreement. The Labor Bureau, Inc., reports that between November 15, 1929, and February 15, 1930, 74 cuts were recorded; and between February 15 and May 15, 1930, 157 cuts, a total of 231. These are mostly in non-union industries. The Labor Bureau, Inc., discusses the trend thus:

Order Without Teeth

"In the May issue, Facts for Workers noted a considerable number of instances in which the wage truce, supposed to have been agreed to by employers at the Hoover Conference early last winter, had been violated by reductions of pay. There was no way in which to enforce any such promise on the whole of industry, since it was made by individuals who had no authority to represent anyone in this matter but their own companies. Only such general moral sense as the community might have about the matter could be relied on to give effect to such a promise. For that reason it is important to publish all that can be learned about violations of the truce. Any employer who cuts wages during this depression ought to be placed very much on the defensive, in relation to public opinion.

Employers—where they can, and as they can—violate wage truces. Yet the high wage philosophy of labor is being recognized the world over as the true road to economic well-being. Two hundred and thirty-one cuts recorded since November.

"The latest list of reductions embraces a wide range of industries, from automobiles to woolen goods. Unfortunately, the list compiled by the Bureau of Labor Statistics, which we here reproduce, does not give the names of individual firms. The list compiled by The Labor Bureau, Inc., however, from miscellaneous sources, names the employer wherever possible. Neither of these lists is complete.

"Among the more prominent employers who have reduced wages are General Motors, through its subsidiary, the Fisher Body Co., the Anaconda, Calumet and Hecla, and Consolidated Copper companies, the Chrysler Corporation, the Consolidation Coal Co., the Union Pacific Railroad, and the Full Fashioned Hosiery Mills.

"Needless to say, most of the employees who have suffered reductions are not protected by union organization. It may be argued in some cases that reduction was an economic necessity, or would lead to a larger volume of employment, but unless such arguments have been supported by complete facts and figures, and have either convinced a union or an arbitrator chosen jointly by union and employer, they are not entitled to credence by the general public.

"We also note that a number of reductions have led to strikes in protest by the employees affected. These cases, which are not included in the tables, embrace union truckers in Butte, Mont., pattern makers in the Detroit Gray Iron Casting Co., workers in the Nonpareil Silk Mill at Easton, Pa., workers for the Hulmeville Hosiery Co., at Hulmeville, Pa., bakers in the Newark Baking Co., miners in the Penobscot Coal Co.

at Avella, Pa., workers for the McKeesport Coal & Coke Co., at McKeesport, Pa., workers in the Taylor Silk Mills at Pawtucket, R. I., stove mounters in the Abendroth Stove Co. at Port Chester, N. Y., and barbers in Youngstown, Ohio."

Leaders For High Wages

These tremendous inroads on buying power are accompanied by published statements of certain business leaders.

George F. Johnson, shoe manufacturer, Endicott, N. Y.: "Wage cutting or reducing income of labor is not a remedy for business depression. It is a direct and contributing cause."

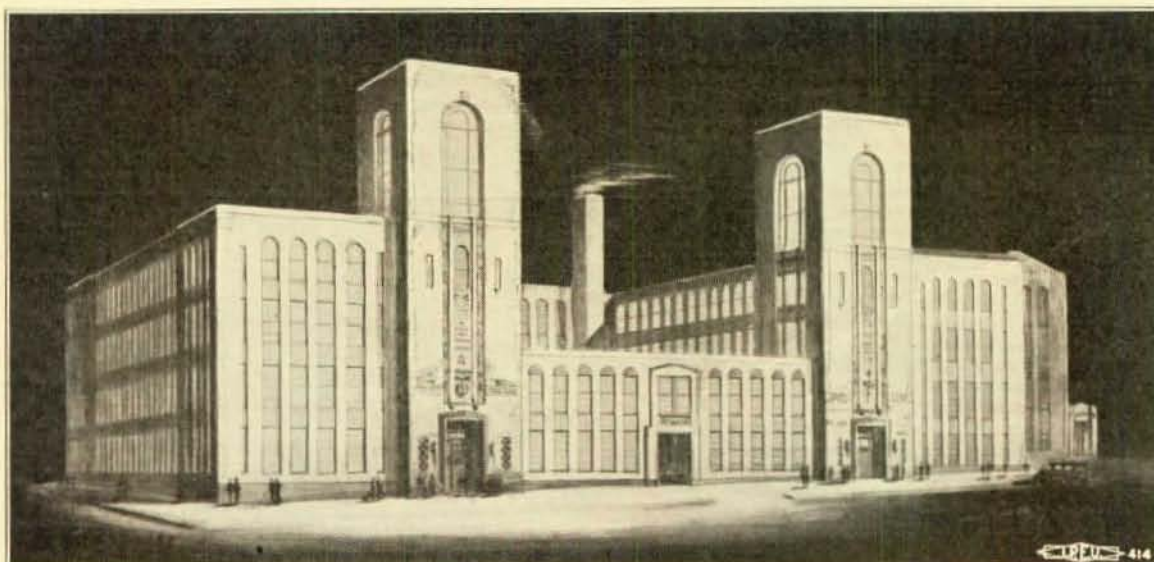
J. A. Farrell, president of United States Steel Corporation: "quoting from my remarks at the May meeting of the American and Steel Institute: I heard a steel man say the other day that wages should come down. I said, 'Oh, no, wages are not coming down in the steel industry; make your mind up to that. If you are going out to sell your goods and eliminate your profit and expect to get it out of the men in the mills you are greatly mistaken.'"

W. A. Sheaffer, fountain pen manufacturer, Fort Madison, Iowa: "I believe it would be a serious mistake to reduce wages, as it lessens the purchasing power of the largest volume of customers and will permanently injure business."

A. R. Erskine, automobile manufacturer, South Bend, Ind.: "We have a standardized working force which works varying hours daily according to production requirements. Have not even considered reducing wages nor salaries and do not expect to be confronted with such an alternative."

Roy Dickinson, associate editor of Printer's Ink: "Ten years ago, when I was a member of President Harding's unemployment conference run by Herbert Hoover, I wrote a minority report against wage cuts. I could get only one of the 50 members to sign it—the late Samuel Gompers. Then it was almost an axiom that wage cuts would bring back normal times.

"Today a new point of view prevails. Maintaining purchasing power at the source is the most important job in the country today, for wages buy more shoes and automobiles than dividends."



SAMUEL GOMPERS INDUSTRIAL HIGH SCHOOL FOR BOYS, NEW YORK CITY

Unemployment Remains Most Baffling Problem

SOMEWHERE about the middle of torrid August New York City sought to do its bit in the job panic by opening a new free municipal employment bureau at 56 Lafayette Street. Immediately the bureau was swamped by applicants for jobs. As many as 2,000 jobless men and women registered per day. Within a week, 12,000 applicants had their names upon the books. What was significant about the long line of waiting men and women was their youth, and persistency. Five hundred waited in a blinding rain for some hopeful gesture on the part of the employment agents. The day the total registration reached 12,000 only 200 jobs were secured by the agency. On the day following, 105 men were placed, 55 of these were sent to laborers' jobs in the subway. The bureau closes every day at one o'clock, so that its capacity to absorb applications is small.

The bureau has sent thousands of letters to employers begging for positions, without success. The futility of seeking jobs that do not exist led Edward C. Rybichi, director, to question the government's unemployment figures. He declared the published estimate that 250,000 were out of work in New York City was ridiculously low.

"There are 250,000 trades unionists alone

New York's new municipal employment office, overwhelmed by applications, suggests intensity of the jobless situation, and irony of seeking jobs which do not exist. Cure needed, not palliative. Labor's chief offers new plan.

out of work in this city which I know to my own knowledge," he insisted.

While this dramatic demonstration was going on in New York City and as it was being repeated in every industrial center of the country—Robert W. Lamont, Secretary of Commerce, gave out the estimate of the jobless made by the Bureau of Census. The total for the whole United States was placed at 2,508,151, or two per cent of the total population. While New York City was unsuccessfully grappling with the jobless problem, the Bureau of Census estimated only 364,617 unemployed in the entire state.

The bureau said that the work had been divided into seven classifications, of which

only the first was represented in the figures made public. These seven groupings were as follows:

Class A—Persons out of a job, able to work and looking for a job.

Class B—Persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle.

Class C—Persons out of a job and unable to work.

Class D—Persons having jobs, but idle on account of sickness or disability.

Class E—Persons out of a job and not looking for work.

Class F—Persons having jobs but voluntarily idle, without pay.

Class G—Persons having jobs and drawing pay, though not at work (on vacation, etc.)

President Green of the American Federation of Labor, added a new plank in labor's unemployment platform, that of an annual instead of a daily wage for labor. Such a wage will tend to bring security to workers; it will cause employers to space their work so that lean periods will not be so lean, or fat periods so fat.

(Continued on page 544)



FOR HOURS THEY WAITED IN LINE, AT NEW YORK'S FREE EMPLOYMENT OFFICE, TO REGISTER FOR JOBS. ONE THING NEW YORK TIMES PHOTO RECORDS, YOUNG MEN AS WELL AS OLD MEN ARE OUT OF WORK.

High Trade Standards Set By Electrical Guild

TAKING a name that suggests allegiance to the highest traditions of the building craft, the Electrical Guild of North America has been founded in Washington, D. C. Headed by men of international reputation, not only for their known achievements in the electrical construction industry, but also for their statesmanlike contributions to the economics and sociology of the industry, the Guild, in the early weeks of its existence, has attracted wide-spread attention. L. K. Comstock is president; John W. Hooley, and Chester H. Chapline, vice presidents; Allen Coggeshall, secretary; and Adolph C. Brueckmann, treasurer. An influential list of builders compose the executive committee. Every section of the United States and Canada is expected to be covered.

In the prospectus issued this month, the rationalistic character of the enterprise is stressed. The idea is to bring the electrical construction industry alongside of the more advanced industries of the country in the field of standardization, and modernization. Co-operation is frequently mentioned and strongly stressed. Research is named as one of the main objectives of the new organization. The new association is in line with the rationalistic movement, which has made so deep an impression upon the public mind, exemplified in such industries as the railroad, on the Baltimore and Ohio, and the clothing, hosiery, and in certain sections of the textile industries:

"The Electrical Guild of North America was organized to promote industrial co-operation in the electrical construction business on a scale hitherto unknown and untried and with sympathetic understanding never before generally practiced in any branch of the building industry. It is the Guild's intention to vitalize every department and feature of the industry with a degree of co-operation and harmony hitherto unattempted. It is proposed to make the industry profitable alike to all its members and to the public through survey bureaus, a central research bureau, and open understandings with union labor. It is further proposed to make the march of the industry uninterrupted by strikes or other unnecessary, not to say uneconomic, obstacles. Modernization and stabilization of the industry, in short, are the objectives."

Touch Made With Past

Care is taken to make clear the significance of the term Guild.

"A corporation or association of persons engaged in kindred pursuits for mutual protection, aid or co-operation, known in England from the seventh century."

The preamble continues with enlarging conceptions.

"Believing that the time has come for the electrical industry, and indeed all industry, to evaluate progress during the last decade in the relationships between employer and

Electrical contractors build new organization on rational lines. Far reaching effect upon entire building industry seen. Research office established. New fields of public service mapped out.

employee, to crystallize that progress into tangible form, to consolidate what has already been gained in the amelioration of those relationships, and to build for further progress and betterment, this organization, whose organic law follows, has been formed.

"Its chief objective, economic in character, is to save to the building public, by the total elimination of the strike and lockout, those hitherto recurring losses due to employer-employee disputes. These losses have been so often unrecoverable, not only by the mechanic and his employer, but also in far greater degree, by the owners or projectors of building enterprises. Such losses have been

sustained not only by the mechanic, employer and owner, but by that larger and more invisible part of the public—the supplier of materials, the manufacturer, and the rent payer—thus unnecessarily contributing to increased expense of doing business and to increased cost of living.

Settled by Reason

"That misunderstandings between employer and employee will continue to occur is to be expected; but when they do occur they will be settled by means of the Council on Industrial Relations, a court which has proved itself by ten years of successful operation.

"Another objective in the operation and the government of this organization will be attained through the medium of local sections, whenever circumstances are favorable and members are sufficiently numerous to render local organizations practicable.

"Still another objective, although closely related to the foregoing, is the settlement of all manner of employer-employee misunderstandings or disputes by means of local councils, fashioned on the model of the Council on Industrial Relations for the Electrical Construction Industry.

"The Founder Member classification has been set up for the purpose of underwriting the venture and guiding it to successful operation."

Continuing its analysis, the initial announcement states:

"We have outgrown the old conception, so commonly held, that the electrical construction contractor properly looked to new building construction for his most profitable if not most exclusive field of operation. This conception is unsound from a business point of view and unsupported by the facts of the industry.

"It should be the duty of local sections of the Guild to collect and collate the facts of the industry in their own local environment, to seek confirmation by comparing those facts with the records of the Research Bureau at Washington and to disseminate them in proper form to the section membership. It is expected that these facts will reveal the great market for their services lying comparatively untouched today, in the utility and industrial fields.

Pays Tribute to Union

"The organization and personnel of the firms and corporations, members of the Guild, coupled with the mechanical skill of the members of the International Brotherhood of Electrical Workers, exclusively employed by them, makes for a combination of effort superior to any other now existing. The knowledge of business organization possessed by members of the Guild, coupled with the training, knowledge and skill of their employees, both staff and mechanical, more than compensates for the higher wages usually paid to union labor.

"All members of the Guild are urged to put forth their best efforts to secure a large share of the utility and industrial business

PRINCIPLES

"The object of this organization shall be the promotion of the general welfare of the electrical construction industry by (1) discovery through scientific surveys of the needs of the public and of the industry; (2) finding and recommending ways and means of satisfying those needs; (3) defining and harmonizing group activities through the formulation of codes of ethics and of practice for the industry, and by other means agreeable to and in the interest of the public and the industry and conformable to law; and to give effect to the following principles:

- "1. The facilities of the electrical industry for service to the public will be developed and enhanced by recognition that the overlapping of the functions of the various groups in the industry is wasteful and should be eliminated.
- "2. Close contact and a mutually sympathetic interest between employee and employer will develop a better working system and will tend constantly to stimulate production while improving the relationship between employer and the community.
- "3. Strikes and lockouts are detrimental to the interests alike of employee and employer and the public and should be avoided.
- "4. Agreements or understandings which are designed to obstruct directly or indirectly the free development of trade, or to secure to special groups special privileges and advantages, are subversive of the public interest and cancel the doctrine of equality of rights and opportunity, and should be condemned.
- "5. The public interest is conserved, hazard to life and property is reduced and standards of work are improved, by fixing an adequate minimum of qualifications in knowledge and experience as a requirement precedent to the right of an individual to engage in the electrical construction industry, and by the rigid inspection of electrical work, old and new.
- "6. Public welfare, as well as the interests of the trade, demands that electrical work be done by the electrical industry.
- "7. Cooperation between employee and employer requires constructive power as both employees and employers become more completely organized.
- "8. The right of employees and employers in local groups to establish local wage scales and local working rules is recognized and nothing herein is to be construed as infringing that right."

which heretofore has been considered, and in many instances was, outside of their fields of calculation. The Research Bureau of the Guild will pay particular attention to this aspect of the new field of activity opening up to members of the Guild.

"The modernization of industrial and utility plants offers a large field for the profitable sale and installation of electrical apparatus, motors and appliances and this field must be visualized, studied intensively and cultivated by all members of the Guild.

"The Electrical Guild and the International Brotherhood of Electrical Workers are making definite plans to provide against cessation of any work in this industry through strike or lock-out. This should prove helpful throughout every part of the industry.

"In order to accomplish the stabilization and development of the electrical construction industry, the sections must be encouraged to operate Survey Bureaus, which from an economic point of view will render, when properly operated, immense savings to the members and the public, and contribute largely to the competency and dependability of the members and to the development of the sections.

Will Enlarge Data

"The establishment of a Research Bureau in the Guild, staffed by capable men, in constant contact with local section managers, is sure to reflect itself helpfully in successful co-operation between Guild headquarters and local sections and ultimately to result in the stabilization of our business and in materially increasing its volume.

"Publication and dissemination of statistical information and other aids ultimately taking form in special bulletins and advice to the sections, will greatly aid all members in finding and developing new fields for their efforts, new opportunities for betterment and growth and greater public service.

"A real service can be rendered the electrical construction industry through publicity, thereby informing the public that the electrical construction industry is a business demanding a high degree of technical knowledge, close attention to details of engineering, and adequate financial resources.

"Many of the activities of the Guild in the direction of improving and developing the industry might well be brought to the attention of the public at large.

"The word GUILD is capable of being capitalized, is capable of carrying a very definite meaning to the public and of becoming

ing a very real asset and a source of profit. It can be made to perform the valuable service of differentiation. In using a trade name, it is essential to remember that its value depends very largely upon the degree to which it is known and accepted. Advertising informs, educates, establishes concepts of value and creates and directs demand. Research and advertising are correlative, mutu-

5 and 6, 1919. These principles, then called a declaration of purpose, were adopted by the National Association of Electrical Contractors and Dealers, assembled in convention at Milwaukee, July, 1919.

"These principles were adopted by the convention of the International Brotherhood of Electrical Workers assembled in New Orleans in September, 1919; the action of the convention being ratified by referendum ballot during the following December.

"The adoption of these principles by the two conventions was followed in each case by the appointment of a committee of five for conference. This conference of 10 was by further action of the two parent bodies in 1920 transformed into the Council on Industrial Relations for the Electrical Construction Industry.

"At the convention of the National Association, held in Cincinnati in 1922, the constitution of the National Association was amended, permitting the organization of two labor sections within the Association of Electragists, International (the change of name having been authorized by the Buffalo convention, July, 1921). These two labor sections were called respectively, Union Shop Section and Open Shop Section.

"The Union Shop Section acting jointly with the International Brotherhood supported and were benefited by the Council on Industrial Relations.

"By action of the Association of Electragists, International, assembled in convention at Milwaukee, August 18, 1930, these two labor sections were discontinued by further amendments to the constitution.

"The Electrical Guild of North America has been organized to carry on the work of industrial co-operation begun 10 years ago by the creation of the Council on Industrial Relations."

The members of the executive committee are:

Adolph C. Brueckmann, Baltimore; Chester H. Chapline, St. Louis; Willis W. Clark, Cleveland; Allan Coggeshall, New York; Louis K. Comstock, New York; Alfred J. Hixon, Boston; John W. Hooley, New York; John G. Livingston, New York; David Lurvey, Chicago; Charles D. Pierce, Detroit; Gerry M. Sandborn, Indianapolis.

Manifests Industrial Statesmanship

A report on the new organization would be incomplete without a word about its president, L. K. Comstock. Mr. Comstock has won

(Continued on page 544)



LOUIS K. COMSTOCK

President Electrical Guild of North America

ally supporting and each positively necessary to the other."

The Electrical Guild, it is made plain, is the culmination of ten years of harmonious relations in the electrical construction industry. It has grown out of the success of the National Council on Industrial Relations. President Comstock reviews the history of the Council and the Guild for this JOURNAL.

A Decade of Trial

"The principles of the Electrical Guild are those adopted by a joint committee of the I. B. E. W. and the conference club, March

New Realistic Note in Labor Day Messages

HOW deeply churches have penetrated to the core of the economic problem is indicated by addresses and messages delivered on Labor Day Sunday. The annual Labor Day message of the Federal Council of the Churches of Christ in America decried undisciplined profit-taking, and indifference to unemployment.

"Large profits, which prompted the speculation mania, were taken from industries which have, except in rare instances, made no adequate provision for neutralizing the harmful effects of the machine system on the lives of the workers. The high productivity of the machine has confronted America with the problem of technological unemployment. It has made the competitive struggle more intense and has tempted many manufacturers, in the fever of competition, to disregard ordinary prudence in production. It has thus multiplied the evils of so-called over-production and consequent unemployment. Furthermore, machine production by transferring skill from the worker to the instrument has placed a premium upon youthful stamina rather than the experience of age. The result is that middle-aged men find it increasingly difficult to secure employment and men over 55 find it equally difficult to hold positions. No more serious charge can be made against our generation than that it has been socially so blind and morally so callous that it has been unwilling to divert sufficient profits of modern industry to store up reserves for the protection of the unemployed and the security of the aged. It has insisted on the rights of property to dividends but has concerned itself too little with the rights of workers to security of employment and to protection in old age. As a result millions who have a just claim upon industry have been forced to accept the bread of charity and multitudes have been thrown as public charges upon the resources of municipalities and states. Moreover, a constant army of unemployed workers imperil the living standards of those who have employment by increasing the competition of workers for jobs.

"A recognition on the part of society in general and of industry in particular of its obligation to offer willing men a chance to work and reasonable security of employment must lead inevitably to the acceptance of the principle of unemployment insurance and old age pensions. It may not be the business of the church to define the application of this principle in specific terms. But every dictate of religious imagination and common sense forces us to accept this social obligation and to urge those in positions of responsibility to work out its practical applications.

An Economic and Religious Problem

"Nor can sincere men who take seriously the application of their religion to contemporary life escape the problem of eliminating unemployment as well as mitigating its evils. When this problem is faced it becomes immediately apparent that we have so-called over production not because every one in our society possesses what he needs, for there are manifestly many families which have not achieved a minimum subsistence standard of living; but because we have not been able to distribute the wealth which industry creates, with sufficient equity to give many of our workers the opportunity of consuming a reasonable share of the total products of industry.

A firmer grasp on economics, and a more courageous facing of unpleasant truths distinguished Labor Day messages this year. Unemployment recognized as major issue.

While the reduction of hours of work per day and work days per week may help to alleviate the unemployment situation, the economic problem of so-called over-production cannot finally be solved except by securing a more equitable distribution of the ever-increasing wealth created by the machine. It may not be in the province of the church to suggest detailed plans for the consummation of this end. But any ethical view of society which does not take this problem into consideration is unrealistic and unredemptive."

Presbyterian Board States

Dr. John McDonnell, secretary of the Presbyterian Board of National Missions, admits that the church does not appeal soundly to workers. He says:

"First: That it is of the utmost importance that the churches of America should determine whether they will capture the wage-earners, and thus regain their hold on them, or whether they will allow them to organize their religion in their own way without the aid of the churches.

"This is a serious question for the churches as well as the wage-earners. In answering it the churches should remember that religion in the past grew out of social and economic ideals, so it may again in the future.

"Second: If the churches are to capture the wage-earners, they must define their relation to the economic questions of today, and when defined maintain it in terms of action as well as attitude, work as well as worship, service as well as verbal statements; and thus prove to all men that they are not concerned with disembodied spirits, but with the vital needs of men, women and children. The wage-earners of our day are critical and challenging and not to be deceived in their examination. No theological or social or even an economic creed will satisfy them; they need Christ, and down deep in their hearts they want Him, for they believe that the hope of the world is still in His keeping and the cause of the wage-earners is still in His heart.

"Third: That the churches always do just about what they understand they ought to do in any age. Get the churches clearly to understand their duty and in the long run they will be found doing it. The trouble has always come, not from any failure of performance of their duty as they understood it, but from ignorance and misunderstanding of their duty."

He too believes unemployment must be solved.

"More and more, thinking men and women are coming to see that the principles of Christ and the principles of sound political economy are one. 'Our civilization cannot survive materially,' said Woodrow Wilson, 'unless it be redeemed spiritually. It can be saved only by becoming permeated with the Spirit of Christ and being made free and happy by the practices which spring out of that spirit.' It is the primary duty of the churches not only to deepen this con-

viction and to foster this spirit, but to discover and disclose to the men of industry in concrete terms of the mind of the Master as it discloses its pronouncements concerning the proper distribution and control of work and wages.

Greater Security Needed

"In his book, 'Can the Churches and Industry Unite,' David Carnegie says: 'I am convinced that every problem in industry can be solved by applying to it the principles of Jesus Christ, and I believe that these principles can best be interpreted and applied by the churches working in harmony with employers and employees. Never in the history of the world has there been such a sense of insecurity in the plans and purposes of men. Prophets have failed, priests have failed, kings have failed. Industrial difficulties exist because the Sermon on the Mount has been discounted by its opponents. Sham adherence to Christ's program has encouraged disloyalty, avarice and hypocrisy in industry, breeding fear, distrust and suspicion. Yet, withal, the churches hold the secret of industrial peace and they do not know it. They will know it when the scales fall from their eyes after an Upper Room experience or a vision on a Damascus Road.'

"By meeting the challenge of Labor Day Sunday in carrying the Light of the world into industry intelligently and courageously, the churches will help to solve the four greatest industrial problems of our day, namely, increased efficiency in production, fairer equity in the distribution of profits, enlarged participation in management, and greater security and satisfaction in work.

"The churches should be deeply concerned just now with the last of these four problems, namely, greater security and satisfaction in work. The distressing and growing problem of unemployment is concrete evidence of the lack of security in work, and the present unrest in labor is concrete evidence of the lack of satisfaction."

Invents Thermometer to Wear Inside Hats

As one phase of the hatless fad in Germany the problem of whether or not people ought to wear hats for health's sake is being studied by Prof. A. Stinder, of Berlin, by the common-sense method of finding out experimentally just what goes on inside a hat when it is on the wearer's head. It is often stated, for example, that hats keep the scalp and hair too hot, thus interfering with the circulation of the blood and causing baldness or other troubles. To test the fundamental facts, Professor Stinder recently constructed, it is reported, small recording thermometers to be worn inside the hat, like a bow or feather on the outside. In one instance, it was found, the temperature inside a Panama hat was only 77 degrees, Fahrenheit, while the temperature outside was 91 degrees. Professor Stinder does not conclude, however, that the temperature inside a hat is always less than outside. That depends on the kind of hat; the material and color of the outer surface apparently being more important than size or provision for ventilation. Studies are to be made of the differences in temperature inside different kinds of hats under different weather conditions; such as air temperature, sunlight and humidity. Apparatus has been designed, also, to measure the humidity inside the hat as well as the temperature.

Constantin Meunier Sings Bronze Hymn of Labor

By GEORGE L. KNAPP, Novelist and Journalist

It is easier for labor to force its way into the halls of legislation than into the galleries of art; easier to prove that the worker has rights than to show that he sees beauty. Art, at least by the time it reaches the dignity of being spelled with a capital "A," generally escapes this form of "class consciousness" only by going in heavily for the more emotional forms of piety. But there are exceptions; and the greatest of these to date is Constantin Meunier, of Belgium.

Meunier is the sculptor of labor, not merely labor in the fields, which has been a fairly common theme in art for a century, but labor in the factory, on the dock, in the mine. His figures are iron workers, and miners, and dock wallopers, and their wives and sons and daughters. He has presented these people in bronze that seems ready to

Story of Belgian Sculptor, who got his themes among the workers in the back country, and who gave his life to carving a bronze monument to labor.

Silences Chatter

Then a commission to draw designs for some "floats" to be carried in some sort of procession took him on a journey through the "black country" of Belgium, the region which in a few years had been transformed from a farming region to one of the most densely peopled industrial centers in the world. Among those miners and puddlers he found his real subjects, and the work for which he is remembered began. He was 53, poor as a church mouse and in doubtful health, when the first work in his new field was given to the world.

The first general exhibition of his new works was held several years later. Critics speak of the silence, the lack of light chatter among the people who attended that exhibition. I noticed the same thing when a splendid collection of Meunier's works was brought to Chicago. There were exclamations of recognition and delight; low voices calling attention to this or that item of interest; but the clack and chatter that make most exhibitions a trial was absent. This work was too serious, too vivid, too true to encourage either parroting or posing in the audience.

The mere list of subjects in one of his exhibitions shows how Meunier glorified work: "The Mine," "Returning from the Mine," "Antwerp Draught Horse," "Toilers of the Sea," "Miner with Ax," "Man with Sledge," "The Puddlers," "The Dockhand"—I could cover the page with similar titles.

Some of Meunier's works are joyous:

"The Mine Girl" and the "Dockhand"—this last, I think, is my favorite. Some are sad beyond words, as "The Firedamp"—a mother wringing her hands over her son, killed by a mine explosion.

All are marked by insight and power; and all, somehow or other, are religious. There must have been a deep, mystical strain in Meunier, though of ostentatious piety, there is not a trace. Brinton puts the matter so well that it is better to quote than to paraphrase. Comparing Meunier's earlier religious paintings with his masterpieces of sculptured works, this critic says:

Victims of Economic Pressure

"The subject-matter was new; but his attitude toward it remained identical. He had simply forsaken the heroes and martyrs of faith for those humbler though not less touching victims of economic pressure and disaster. He exchanged cathedral and cloister for factory and furnace. His monks became miners; his sisters of charity, colliery girls.

"Out of modern industrialism he forged his own religion, and through unflinching faith and energy succeeded in bestowing upon labor the precious baptism of art.

"That dark line of rhythmically swinging figures in 'Returning from the Mine' suggests a great recession of labor. Work has become a solemn, physical ritual."

And, in directly religious sculpture, it would be hard to find a more impressive work than Meunier's "Prodigal Son."

Fame came late and with it comparative prosperity; but Meunier had lost his two sons, and he had been poor so long that he often walked long distances because he forgot that he now had money enough to ride. He planned a great monument to labor; a monument that should make Belgium unique in being first to recognize the basis of civilization. When the government refused to take up the plan, Meunier began work on it himself.

(Continued on page 544)



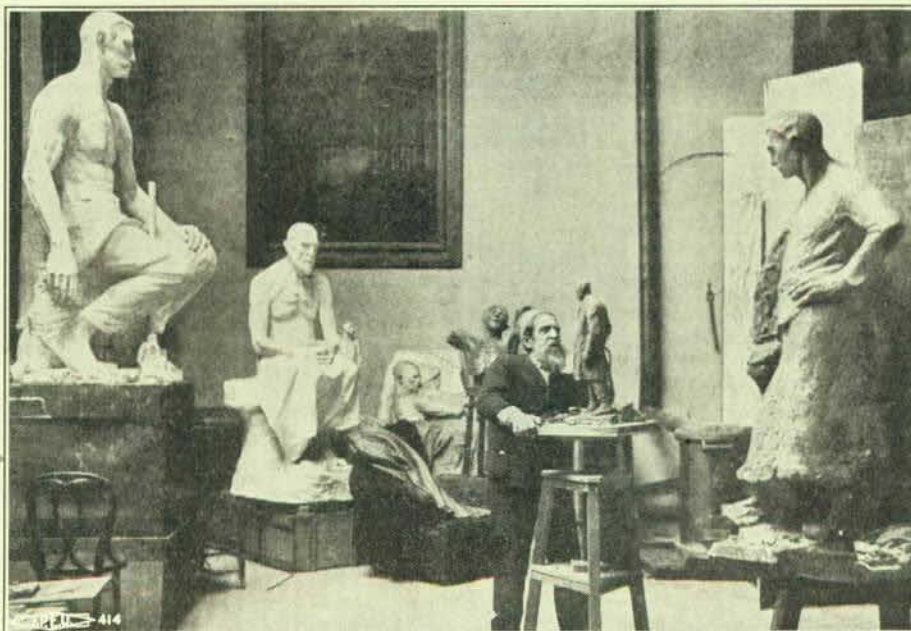
HEAD OF WOMAN

speak; he has made them beautiful without the sacrifice of one jot of realism.

Constantin Meunier was born in a suburb of Brussels, April 12, 1831; the youngest of a large and poverty stricken family. He lost his father while still a baby. Times must have been hard, in spite of the proverbial Belgian industry and thrift; but while poverty is incomparably harder to escape from on the continent of Europe than in America, it seems to be more endurable. Perhaps this is because it is accepted as a sort of permanent status.

Constantin's health was fragile from the first. His brother, an engraver, taught him a solid craftsmanship, and got him into the studio of a then-famous sculptor. Constantin served dutifully through the apprenticeship; but he did not like the empty prettiness of the kind of sculpture he was taught, and did not yet realize that there could be any other.

He turned to the painting, which was somewhat freer. In time, he was recognized by brother artists as one of the leading painters of Belgium; but he was not popular; and he remained bitterly poor. He married early, and while his family was growing, Constantin Meunier made drawings for stained glass windows and even for decorated kerchiefs.



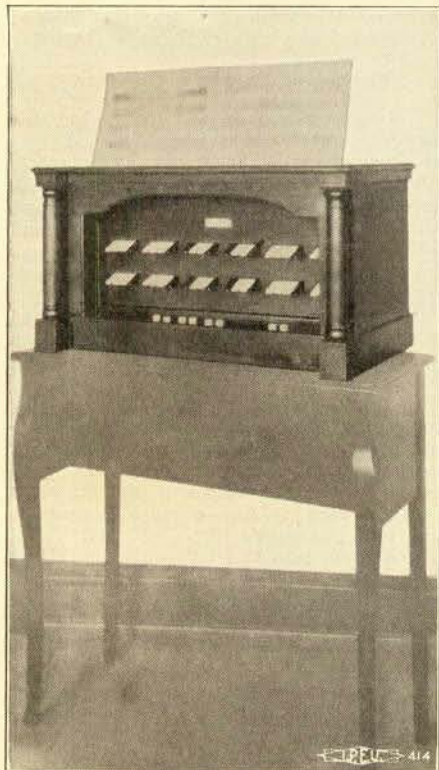
MEUNIER IN HIS STUDIO SURROUNDED BY COLOSSAL FIGURES THAT MADE HIM FAMOUS

New World's Fair Will Be Decorated With Light

By H. W. MAHER, Secretary, Electrical Maintenance Society

ELECTRICITY will play a big part in the Exposition of a Century of Progress, the Chicago World's Fair of 1933. Its uses, practical utilities and the most modern apparatus for projecting moving color illumination will be demonstrated both for embellishment of the exposition and in connection with the displays of science and industry.

Rooms in the buildings of Chicago's world's fair may be illuminated by invisible



CONSOLE OF LIGHT ORGAN

rays of light and the exteriors made to change constantly in color and pattern.

Experiments are now under way which promise that the invisible rays, emanating from screened vapor bulbs, can be utilized to activate luminescent substances painted on the walls and so produce light in a room which has no visible source of illumination.

These luminescent paints can be made to produce a large amount of light for a short period or a small amount of light for a long period after the activating source is shut off. The intensity and period of the luminosity depend on the wave length of the activating source.

In the words of C. W. Farrier, assistant director of works for the exposition, "Projection apparatus and optical devices are now available which make it possible to decorate entire rooms with no other media than light."

"A medium which offers such possibilities is of immense importance to architecture and cannot be neglected. The electrical industry will have an opportunity, in the next three years, to show the world what lighting as a decorative medium can do for architecture."

Windowless, Yet Brilliant

"It is highly probable that the buildings will be artificially illuminated by day and

The great fair of 1893 first celebrated the magic practicality of electricity. The new world's fair of 1933 will etch new grand-deurs of electrical achievements.

by night on the inside. The advantage of this is that at no matter what time of day or night the exhibits are seen, they will always present their best appearance. It also makes possible the direction of the attention of the passerby upon the objects displayed. Such buildings will have no windows."

A notable example of this will be the exhibition building of the Travel and Transport Show. This building will be unique in form and method of construction. It will consist of two towers, each 125 feet high, connected by a low building, the whole structure measuring about 1,000 feet in length. The roofs of the towers will be in the nature of domes, suspended by "sky-hooks," utilizing the catenary or suspension bridge principle. The towers will be 125 feet in height and 200 feet in diameter, with bases each 26 feet high and 300 feet in diameter. The south tower will be built first. The north tower may be built later.

The Administration Building, which will house the executive and operating staffs, will be built on the lake front near the Field Museum and tons of steel are called for in the specifications. It is expected that the building will be ready for occupancy long before the fair opens.

Opens With Electricity

The entrance to this building will be highly illuminated and will form an electrical display in itself. It will serve as a sort of lighted sign board in promotion of the exposition during the time intervening before the opening day.

This second Chicago world's fair is a pretentious enterprise which is backed by many of Chicago's leading and most substantial citizens. It is not designed to be a local celebration, although it will commemorate Chicago's one-hundredth birthday as a municipality. It will be international in its

scope and importance. It will be much different than the customary type of world's fairs, especially because it will not be a "trade" fair at which are displayed the exhibits of competitive manufacturers and other concerns.

The main theme will be the accomplishments of science applied to industry. The exhibits will be those of entire industries, rather than individual displays. More than 400 eminent scientists are working on ideas and plans whereby these displays may best portray, in dynamic, interesting and entertaining fashion, scientific achievements.

Needless to say, there will be plenty of amusement and other features to round out a complete world show.

WHAT ELECTROCUTION DOES TO CELLS IN BRAIN

How electrocution kills its victims by destroying the internal structure of nerve cells in the lower part of the brain called the medulla, so that these cells no longer discharge their duty of regulating breathing, has been reported to the American Medical Association by Dr. O. R. Langworthy, of Baltimore, Md. Dr. Langworthy obtained small samples of nerve and brain tissue from the bodies of two individuals killed by electricity; one of them a suicide, the other a criminal who was electrocuted. In both bodies the nerve cells of this medulla, between the brain and the spinal cord, showed damages visible under the microscope. The central nuclei of the cells, believed by physiologists to be the mechanisms which control the cells' activities, were displaced from their usual positions and altered in character so that they absorbed more than usual of the dyes which microscopists use to stain and make visible such structures inside the cells. Other structures of the cells seemed also to be disorganized and partly destroyed. Although the suicide victim received the current between the left arm and the left leg, so that the electricity did not pass directly through the brain, the same injuries to nerve and brain cells were found as in the other case, suggesting that these cells in the medulla are especially sensitive to electric shock. This also explains why one of the first effects of an electric shock is to stop breathing, since that is a bodily activity which these cells control.



CHICAGO'S UNION STATION IS AMPLE TO HANDLE EXTRAORDINARY CROWDS TO THE METROPOLIS.

Bell Recruits From Unsuspecting Youth

TOM DELANO graduated from high school with a major in physics. He borrowed \$400 and entered a first rate electrical school. On graduation, he took a position with a subsidiary company of the American Telephone and Telegraph Company, in a southern city. This year, the eighth since his graduation, he returned to his alma mater. He told of his experiences. In that time Tom had met the following employment conditions:

1. He received 57 cents an hour at the beginning, and now after eight years of service.
2. His promotions have always resulted in increased duties, with no increase in pay.
3. He has received special schooling from the company, but this schooling does not enable him to improve his professional standing.
4. He can work no place else, with all his special equipment, save for the telephone company.

This is rather a drab, gray, monotonous future for any young man, with special training, but it is these conditions that the American Telephone and Telegraph Company fails to describe in their handsome booklet:

"Entering Industry"

"A Description of Work in the Long Distance Communications Field and

"A Prospectus of Opportunities For

"High School Graduates With Scientific And Technical Aptitude."

This is being distributed among high school students.

This is the foreword:

"No better decision can be made by the young man who has graduated from high school with good scholastic standing than to continue his education in some one of the institutions of higher learning.

"It is realized, however, that there are some who, for financial or other reasons, find it impossible to devote four or more additional years to further study. But such men need not feel that opportunities for advancement in life have been denied them. While industry in general unquestionably recognizes the advantages of a college education, many of its foremost leaders have never had formal college training.

"To certain groups of high school graduates who do not plan entering college and who have a special interest in scientific or technical subjects, the Long Lines Department of the American Telephone and Telegraph Company, which is a branch of the Bell System, frequently offers employment with unusual advantages in the following respects:

a. While on the Company's pay roll, the high school graduate has an opportunity to further his education both through training courses offered by the company without charge to the student, and through extension courses offered by certain educational institutions.

b. The work offered is fascinating. It is also stable in nature and in a rapidly growing industry. This organization has about doubled in size during the past five years and a continuing growth is foreseen.

c. The company has a liberal policy with respect to wages and has always been progressive in standardizing working conditions that show due consideration for the employees' interests and general welfare. The harmonious working relations among

High school boys and girls are solicited to enter low-paying jobs of the Bell Telephone Company. Glowing pictures painted.

its employees are a big factor and the congenial contacts and co-operative attitude that exist throughout permit the young worker to adapt himself readily to the new business environment and make valuable acquaintances with older and more experienced men many of whom are college trained engineers. It is a tradition of the business that these men endeavor to assist and teach the new employee in every way possible.

d. The company prides itself on its safety records. The telephone central office, although electrically equipped, does not employ high, dangerous voltages and is remarkably free from accident hazards.

"It is the further purpose of this booklet to give a brief description of the organization and functions of the Long Lines Department of the American Telephone and Telegraph Company and to outline more in detail this company's plan for the employment and training of high school graduates."

Now contrast this prospectus with Tom Delano's experience. The "liberal policy with respect to wages" means a little more than \$100 a month. The "training courses of the company" is part of a grudging, ruthless efficiency system to get more work for the same pay out of the boy. "The fascinating work" is the kind that is unchanging. No boy can seek another employer. There are none. This vocational pamphlet "Entering Industry" is being distributed among high schools of the United States.

Rain-Making With Ice-Sand From Airplanes

A new way of making rain artificially by sprinkling super-cold ice crystals from an airplane has been tried in Holland. Ordinary ice is shaved or broken into very tiny grains almost as fine as snowflakes. This powdered ice then is cooled in a refrigerating machine to a point much below the freezing point so that it becomes a kind of extremely cold sand, the super-frozen ice crystals seeming as dry and hard as ordinary sand grains would be. Protected from melting by a covering to keep out the heat of the air, these ice grains then are taken up in an airplane and sprinkled into the air, much as a streetcar motorman sprinkles sand on a slippery rail. In recent trials over the Zuider Zee, it is reported, this sprinkling of the air with ice-sand resulted in sufficient cooling to cause the formation of a thick cloud and the fall of a little actual rain. The action of the ice-sand was observed from other airplanes flying below the one doing the sprinkling. Advocates of the new method do not claim that it will make it possible to break actual droughts like that which occurred in the United States this summer or to create heavy wide-spread rains. It is hoped, however, that local rains sometimes may be caused to save especially valuable crops in case of local drought, like the crops of tulips or of early spring vegetables for the markets of Paris and London which are exceptionally important to the farmers of Holland.

Children Grow Tall in Spring

Scotch children grow taller chiefly in the spring months, between March and June, but gain weight chiefly in the summer months between July and September. So it has been discovered by Dr. J. B. Orr and Mr. M. L. Clark of the Rowett Research Institute of Aberdeen, Scotland, who measured and weighed four times a year 657 children between the ages of 7 and 11 in the Scottish towns of Glasgow, Edinburgh, Dundee, Peterhead and Greenock. The average increase of height of the boys between March and June, the measurements showed, averaged nearly three-quarters of an inch. Girls grew even a little more than boys, on the average, during this quarter. During the summer quarter, June to September, increases in height of boys and girls alike averaged less than half an inch and during the two winter quarters of the year growth in height was still less. The spring quarter thus shown to be the time of maximum growth turned out, however, to be a poor time for increases of weight. Some of the children actually decreased in weight during the spring although they continued to grow taller. In the summer quarter, however, both boys and girls got notably fatter, the average increase of weight being nearly two pounds, as compared with an average of less than one pound during the spring and late winter and only about a pound and one-quarter during the months between October and December. Doubtless some such weather factor as varying temperature or varying amounts of ultraviolet rays is responsible for these newly-discovered growth differences but Dr. Orr and Mr. Clark venture no theory of what these weather influences may be.

Mountains 500 Miles Away Seen By Lightning Mirage

A night-time mirage of the High Atlas Mountains in northern Africa, seen from five hundred miles away by the lightning flashes of a thunderstorm is the remarkable phenomenon reported recently to the French Academy of Sciences, in Paris, by M. Jean Lugeon, who was measuring the electrical state of the atmosphere at El Golea, on the northern edge of the Sahara Desert. One night while observations were being made on the summit of a small hill about three hundred feet high, M. Lugeon's party was astonished to see in the northwestern sky a band of light, close to the horizon. After a moment there flashed into view great, snow-covered mountain peaks brilliantly lit by incessant lightning flashes. On another evening the vision was repeated. The only mountains in that direction, and indeed the only high mountains in that part of Africa, are those of the High Atlas range, located, M. Lugeon reports, about 800 kilometers or almost 500 miles from his point of observation. This distance is so great that a direct sight of the mountains would be impossible because of the curvature of the earth. Accordingly, the sight which M. Lugeon and his companions got of the giant range must have been a mirage due to the bending of light rays; one of the few examples of night-time mirages ever recorded, and so far as known the first one to be observed by lightning. M. Lugeon took the trouble to confirm this theory by discovering from the Moroccan weather service that violent thunderstorms actually were in progress in and about the Atlas range on the nights when the mirages were seen.

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No. 9

The Labor Game

There comes a time in the exercise of any art, or craft, or job, when it is spoken of as a game.

Thus we speak of the game of life, the old army game of politics, the game of love, and the labor game.

Just when an art becomes a game is hard to say, but it is usually when the hardships, the routine sweat and bustle, the recurring problems press down hard upon the participator, and crowd into a new perspective the more ideal elements. A breathless young "statesman" just out of college, who is going to reform the rotten old machine-run party never thinks of his work as a game. It's a cause. It's a drama, with him as central figure. After a time, perhaps, when he sees how uncertain this stuff called human nature is, how self-interest rami-fies nearly all idealism, he is likely to begin to "play the game."

To use another comparison. The most enthusiastic, idealistic backers of war are those fellows who never reached the bloody front line trenches. War to them is a glorious feast of patriotism. It is never a game.

Now there comes a time when the conduct of union business becomes a game. This is when the hard, materialistic seams of the struggle show through. The labor unionist is usually well informed on the economic struggle. He comes to a knowledge in time, that the union is affected by economic forces, over which unfriendly men and not labor unionists have control. (A labor leader of long experience said: "It is not work alone which makes labor leaders break down, it is seeing so many problems about which they can do nothing.")

The labor unionist is working with that uncertain medium, crowd psychology. Sometime he is bound to be the victim of crowd madness, and see wise ends defeated because of an emotional spasm on the part of the crowd. The labor unionist is subject to the slings and throws of an unstable economic system. Usually he has only a small financial margin built up against actual want, and he must give more time than most men to the sheer business of subsistence; still he must carry on the union's life. The labor unionist must sit outside of adulation; he cannot have the same place in the community that the doctor, the banker, the lawyer has. He must pay a price for his unionism. The labor unionist soon finds that enemies lie in wait—secret enemies—to trip and injure him. It is a starkly brutal game. Yet he must carry on.

He does not lose sight of the ideal aims of co-operation, but he cannot bring himself to prate about them any more than a

veteran of the front line trenches can stomach the rookies' high flowing patriotism. The game is the thing—doing the best one can, day after day, in the face of multitudinous discouragements.

It is playing this game as it is, that has produced some of the finest citizens America possesses—real veterans of a never-ending war against brutality, stupidity, greed and ignorance.

Machine Shadows

Prof. Paul H. Douglas, to whom wage-earners are indebted for his researches in wages, has made a survey of technological unemployment for the American Federationist—the first half of which we find an exercise in futile mathematics. Professor Douglas spends much time to prove that permanent displacement of workers by machines is impossible. His demonstration of the dexterous use of Euclidian methods resembles in effect the serf's old dream of eating pie in the sky bye and bye. Or it reminds of D. H. Lawrence's—

"They talk of the triumph of the machine but
the machine will never triumph.
Oh, no, in the hearts of some men there still is
sanctuary
Where the lark nests safely.
Ah, no, the machine will never triumph;
In some hearts still the sanctuaries of wild life
are quite untouched."

But after his excursion into pure mathematics, Professor Douglas makes up for his self-indulgence. He himself says:

"But all of this analysis has ignored the question of time and has assumed that the consequences outlined follow immediately upon the initial causes. But in real life this is not so. It takes time for the readjustments to be made and during this period many individuals suffer. Economic science, in its praiseworthy zeal to establish longtime relationships, has all too often neglected the short-time factors which delay the working out of ultimate consequences. This is always a defect and it is doubly so when the well-being and happiness of large numbers of people are impaired by those temporary frictions which the economist blithely ignores. We shall not make much progress in dealing with the human results of technical change or in controlling it until we see fairly clearly that the ultimate benefit which flows to society in the form of higher real incomes is obtained only at the cost of great and undeserved hardship to many."

The Coming Set-up In Industry

Professor Douglas does a good piece of thinking after he gets day-dreaming out of his system. He does much to help us envisage the kind of industry which is being erected in the United States. It is to be the world of the machine. The machine is to continue to dominate. If the machine is not to be master completely, it must become a world of thought. Professor Douglas foresees each industry with a corps of research men—forecasters—capable of measuring the effect of each new invention upon man-power. He expects to see a system of competent nation-wide unemploy-

ment exchanges, that are capable of passing men quickly from communities where work is slack to communities where work is brisker. (He fails to see that our industries are national, and that paralysis in one place usually means paralysis elsewhere.) He wants a much-improved school system to train youth for industry, to make a boy bicompetent, that is master of more than one trade. He expects to see a dismissal wage generally in effect, paid to displaced workers to compensate for present loss of jobs. Insurance against unemployment will be the accepted thing. In fact, what is happening, and what is to continue to happen is the persistence of a rapidly changing industry, subject to the interplay of invention and discovery, and the manipulation of profit-seeking managers.

Professor Douglas says nothing about the role of the union in such an industry. But it is apparent that in the restless shift of industrial forces there is to be less stability for the lone worker than ever before. The union must exist to provide stability, and the coherency of life, which the industry and the individual can not provide. But to do this the union must acquire a degree of mobility and agility, which it has not hitherto had. It must, too, become able to forecast economic consequences of machine-invoked changes.

Bowing the Peddler Out

"The labor market is the only market where the peddler is still supreme." This is the gist of an article by Dr. Sumner H. Slichter, Harvard Graduate School of Business Administration, in the New Republic. Dr. Slichter writes on the need of orderly marketing for labor and draws an unpleasing contrast between what the government is doing for the farmer, and what it is doing for labor. He finds much for a federal labor board to do. It could study vocational preparation of youth; the rejection of men from industry; the fixation of work age limits. It could "bring together middlemen and manufacturers for the purpose of increasing the amount of advance ordering and for arranging special credit terms to stimulate it." It could make "every new machine that displaces labor" a subject of immediate study. It could become a clearing house for all research information on unemployment. Dr. Slichter makes an interesting contribution to the contemporary literature dealing with this major problem of unemployment. We wish, however, he had written: "The only thing that keeps the labor market from becoming the peddler's market is the labor union. It acts as an agency to protect the worker, and to stabilize, and make competent the labor supply."

Unemployment Figures

A dispatch from Boston declares that a captain of a fire department has discovered the hungriest man on record. A crust of bread tossed to a flock of pigeons was intercepted by a passerby, who made off with it, though the fireman ran after him in order to present him with a square meal. In this minor incident we have the symbol of America's ineptitude—her inability to adjust her tremendous technical resources to her population needs. The same weakness is apparent in the employment figures just announced by the

Secretary of Commerce. Though the entire resources of the Census Bureau were given over to making an unemployment census, the figures announced are not above suspicion. Prof. Charles E. Persons, of Iowa, resigned from the Census Bureau with the thunderous charge that Mr. Lamont's figures "were deduced from picked areas where there are no large industrial centers, and are not representative." Mr. Persons also denounced the way the figures were taken. It appears that if a man had an odd job on the day prior to the enumeration, he could not count himself unemployed. Part-time workers were not counted as unemployed. Professor Persons estimated the jobless to be twice those of the census bureau, approximately 5,000,000.

A recent bulletin issued by the U. S. Department of Labor describes a census of the unemployed made in Philadelphia just a year prior to the federal census, namely, April, 1929. At that time—at the height of prosperity—whereas the federal census was made in the trough of a depression—one out of every 10 wage-earners in 31,551 Philadelphia families "were unemployed." This is not all. The same percentage of workers were jobless in Philadelphia in 1929 as were jobless in 1915, "at the time, when the industries of Philadelphia were just commencing to recover from the serious 1914 depression."

It seems strange in the light of these facts, that Mr. Lamont finds so few unemployed in Philadelphia in the midst of a panic.

Gerard's List of Kings

Gerard's list of 40 rulers of the United States, amended to read 64, has given the press more to talk about than the defeat of Gallant Fox. The list being composed of bankers, industrialists and newspaper publishers, and not one politician being included, has come in for a lot of tall explaining. "Hush, not even the President of the United States, and only Secretary Mellon, and he not as Secretary, but as head of the power and aluminum interests." What an awful faux pas on the ex-ambassador's part.

We just can't get excited. What Gerard's list stresses is the industrial character of our country, and this can not be denied. We are more industrial than political. In this sense, Henry Ford is more typical of America than Herbert Hoover.

Nor are we taken in by the grandeur of a Morgan, a Mellon, a Teagle, or a Gifford. We know they are only symbols. It is as if Gerard had said: "International banking is important. Aluminum is important. Oil is important. Telephones are important." We are not one of those who believe Walter Gifford is a great man because he leads a great corporation. We know how much sweat, skill, talent, experience, engineering genius, and financial statesmanship of other men are wrapped up in this symbol labeled Gifford. When Gifford talks on technical questions, who are the engineers who hand him the data? Who advises him on investments? Who is his director of public relations? These anonymous engineers, financiers and publicity men should move into any true picture of Mr. Gerard's kings. Gerard's kings are not individuals. They are groups. They capitalize other men's brains. They are not giants but representatives of collective knowledge and talent. As such they are important and only as such.



WOMAN'S WORK



WOMEN SEE UNEMPLOYMENT IN TERMS OF DISASTER

By A Worker's Wife

DISASTER! A great dam breaks, and in the blackness of midnight the rushing waters toss homes, cattle, human beings, and all else in their path to destruction! A raging fire sweeps a city, spreading havoc, loss and death! Or a tornado crashes through a district, flattening buildings as though they were houses of cards. In any of these cases, or in others, where disaster strikes a community, help will be swift and certain. The generosity of the American people will care for the hurt and the destitute. From all parts of the country money, clothing, food, workers, will be gathered to be used for relief of the sufferers.

But unemployment is a disaster that strikes secretly and undramatically. Newspaper headlines seldom shriek the plight of men desperately searching for jobs. Perhaps a flood is considered an act of God—but who is responsible for homes lost and children starving for lack of wages? Is it the individual workman—or the business system? Too much has been said about "any man being able to find work if he wants it." In the present emergency this has been proved to be a fallacy; now, once and for all, let the responsibility be fixed where it belongs.

Unemployment has struck not one community but all; billions of dollars of wages which might have relieved the depression at its outset have been lost irretrievably—time which might have been spent profitably at work has been wasted in a pitiful search for jobs. And instead of providing relief, heads of business and government have either issued rosy statements saying everything was all right, or have sat around arguing what should be done and who should do it.

Unfortunately, we have been fooling ourselves that prosperity would last. Up to the crash last fall people were deluded into believing in permanent good times. We were told that the business cycle could go up and never come down. Even the popular song reminds you that "you can't have sunshine forever." We've had some mighty good years, and good wages and brisk employment. Now we have calamity, depression, unemployment, and, last, a withering drought that is bankrupting farmers and will raise prices on foodstuffs, it is feared.

Tested in Human Misery

If, as we suspect, many people have been living from hand to mouth, believing that wages and salaries would never be checked, buying luxuries and saving little or nothing, some of the economic theories developed during prosperity will be tested to the full in human misery.

But this is no time for hysteria. People are apprehensive. Even those with steady jobs, or well secured incomes, are saying apprehensively, "I don't know what is going to become of us!" Bugaboos of panic are crowding their brains.

Let's not let imagination make cowards of us. Instead of fearful bewailing let us have

intelligent preparation for the future. Let's count up our assets and make the best of them.

The electrical workers are strongly organized, with wise, progressive leaders who will take every opportunity to safeguard the welfare and security of the men of our craft. We control a basic trade, little affected as yet by the inroads of the machine, and employment, at a high wage, has usually been plentiful. A sane policy of co-operation and arbitration has avoided costly strikes and created friendly relations with employers.

We have been fortunate in having less unemployment in the past year than many of the building crafts. Certain locals have reported that all men are employed at present—but usually say that they don't expect it to last. Where work has been scarce, locals have instituted the five-day week, a permanent benefit, putting some 10 per cent more of their membership to work. We still enjoy the same high wage scale. Surely the electrical workers are in a fortunate position. Remember, too, that no depression can result in more than a temporary setback to the electrical industry. We are surely justified in saying, "Have confidence and hope for the best."

But we would be foolish, indeed, if we did not realize that this is a time to prepare for the worst. Summer is over and winter looms blackly ahead, cold, mysterious, unpredictable. We must be ready for months when jobs are few. We must add to our savings before it is too late, and forego luxuries. We must spend carefully and guard against waste.

Luxury Lunatics

America has been luxury-wild. Too many people have spent up to the last nickel of their incomes and have gone recklessly on to borrow from future earnings, in the form of installment buying. Radios and automobiles have made us a nation of debtors. Sometimes last year's automobile ate up this year's beefsteaks. We must go back to a simple, and sane, scale of living. This does not mean that we must become misers, or deny ourselves the necessities, but we must learn values, provide for the future, and cease to mortgage ourselves for unnecessary goods.

Whatever agencies may be called into the situation to provide relief we do not know, but judging from the evasions and broken promises of the immediate past, we are not very hopeful. This means that we must provide for our own. First, our families; next, members of the union must co-operate to take care of each other. Plans for unemployment relief will be formulated in cities where needed. Congress, the President, business leaders are a long way off and hard to reach; the union must prove its usefulness in this emergency, must take care of its members.

But while we are accepting temporary hardships with courage, we must be looking

for permanent gains for labor. Though promises made at Hoover conferences have not been kept in many instances, the high wage theory has stood the test and has gained so many prominent adherents that it is generally accepted as fact. Other labor policies are to be tested—the short work day and week, co-operative relations, and others. This is an opportunity to prove the soundness of these policies—as labor formulated them, not as changed to suit the ideas of some penny-pinching plutocrat.

The union label must not be forgotten. When you make purchases of goods with the label that means that a larger proportion of your dollar goes for wages, and less for profits, than if you bought an article of non-union manufacture. High wages will help us out of the depression, so back them with your buying.

Nor should we neglect our political opportunities. The public is wakening to the need of old age pension, unemployment relief, injunction relief, and other legislative adjustments labor has long been fighting for. Now is the time to elect men to office who will defend, instead of assault us in time of trouble.

Auxiliaries Going Ahead

Guess we haven't mentioned lately how happy we are over the way the women's auxiliaries to some of our locals are going ahead. Of course, the number of auxiliaries, compared to the number of locals, is infinitesimal, but the movement in our International Union is young, vigorous, and spontaneous. It is growing, and will continue to grow as long as our women keep that eager, youthful spirit. Only a few years ago there were no auxiliaries. Now there are—only too few, it is true, but each group burning with organizing fervor, anxious to convert their sisters in other cities.

A year or so ago there were no auxiliary letters in the correspondence pages. Now there is always a large percentage of the auxiliaries represented in the JOURNAL. One month, this summer, we had a letter from every auxiliary. Isn't that great? And every letter brimming with enthusiasm.

Women's groups, in this union, are not organized "from above." They spring up out of a genuine demand on the part of electrical workers and their women relatives. These groups are bound by no rules except of their own devising. They are free—to organize and grow exactly as they please. They devise their own constructive programs, fitted to the needs of their locals, and do what their own hearts and minds tell them to.

Their success is proved by the way they are growing, new groups rising here and there, their own pride and joy in the work they are doing, and the satisfaction expressed by the men folks in locals where auxiliaries lead in good times for all—and envious comments from other locals were: "We'll have to have an Auxiliary soon."

Luxurious FURS

Are fashioned
into beautiful
coats through
the skill of
Union fur
workers.



Of finest North-
ern pelts, made
with exquisite
care, these coats
are cause for
pride on the part
of union fur
workers, Locals
52, 51, and 69, of
the Twin Cities,
Minneapolis and
St. Paul, through
whose courtesy
these photographs
were obtained.

PRE

ON EVERY JOB

There's a Laugh
& Two

Walter Hendrick, the Local No. 7 rhymster, is anxiously awaiting some reply from the "Duke" to his last crack, and sends another verse to annoy that dignitary out of the hole he has been hiding in the last few months. We hope it will do that little thing:

Where's the Duke?

A poet's pen is mighty queer,
Especially when filled with beer.
A wireman's pen can raise the deuce,
Especially when he's full of juice.

To which we might add—

The "Duke's old typewriter missed and stuttered,
But, oh, what words of wisdom it uttered!

So utter a few more, "Dukus"; your public
can't stand waiting any longer.

Apropos of recent doings in the "City of Big Guns," a Local No. 134 Brother sends us this story:

Chicago Justice

A few years ago a Chicago Jew was accused of murdering his partner in business and was sentenced to be hanged.

After several re-trials and delays his day of execution approached. A few hours previous to the execution the sheriff said to the Jew:

"Isaac, do you know you cost the state over \$1,000 before they could hang you?"

"Well, Mr. Sheriff," the Jew replied, "Why didn't you pay me \$50 in the first place and I would shoot mineself!"

Chicago is not all machine guns, as proved by this tender tribute:

To My Daughter on Her 16th Birthday

I would that time might pause a while
And hold this fleeting hour
To keep her, with her dimpled smile,
Unsuited, like a flower.

The years have come and gone, since when
I held her as a baby.
Ofttimes I'd like to now, but then
She'd think me silly maybe.

I'd like her to crawl in my arms
And tell to me her troubles;
I know right well that her alarms
Would fade away like bubbles.

Oh, God, if you can hear my prayer
Will you to her be kind,
And guide her footsteps on to where
Love, happiness, she'll find?

G. G. P.,
L. U. No. 134.

"Aren't you a little careless in your attitude toward money?" the phone operator rebuked the visiting lineman.

"I ought to be, I'm so well acquainted with money I can call it by its first name," the hiker asserted.

"Indeed!" remarked Milady of the plugs.
"And what do you say to it?"

"So long, Jack!"

"There is more than a suspicion that electrical work has been held up in Saskatchewan, Canada, by politicians in an endeavor to snatch votes from the laboring man," says a Canadian Brother. "Mismanagement" is written all over the Saskatchewan Power Commission. And he submits the following poem. It may be funny to some folks but it's a tragedy to the lineman:

Facts

By Gar: Nobody seem to know
Why Government, she is so slow,
An' linework nevaire seem to go—
Up een de nort' countree.

When company have de right of way,
Den linework she pay every day;
But dat not politician way,
Up een de nort' countree.

Dey lay ze pole on first of June,
Ze hardware, she not bot so soon;
E'en August dig wit' bar and spoon,
Up een de nort' countree.

Dat lineman have to live, by bread,
Nevair seem to enter some thick head;
Don't care a dam if lineman dead,
Up een de nort' countree.

Ze politician, she full of guile,
And always make ze soapy smile,
An' mak' fine promise all ze while,
Up een de nort' countree.

To get ze vote by price of blood,
Dat politics an' dat ees good,
If dey don't get dat—dey don't get in,
an' nevaire could!
Up een de nort' countree.

—PIERRE FONTAIN.

Here's a good word for the Class "C" boys
of Local No. 23:

To 'C' Men of Local No. 3

Fellows of Class "C"
Here's a word of cheer,
If you'll pay attention to me,
Encouragement and sound advice you'll hear.

We all know how tough it is
The streets to survey;
To be an employee of the city's
Without getting any pay.

Don't blame your officers when times are hard,
They'd surely like to see us busy,
Remember how hard it is to get a card,
And that talk is cheap and easy.

Here's advice that's not so bad,
You may turn it down if you desire;
If we ever want to get ahead,
More knowledge we must acquire.

So let's study up on the ABC of electricity
And maybe some day
We might live to "C"
Our boys "swinging bologna" with men of
Class "A."

ABE GLICK.

THE OPERATOR

The guardian of our power and light,
Lonely and contented day and night;
In rapture moves from log his seat
To hourly meter in his retreat.

Where pleasant sounds ring all about
From loaded cables notes come out;
Like pilgrims going on a mission
Of various degrees and condition.

Its power he finds with skillful hands
Buried in vaults barred and banned;
There settled for life is might subdued
Where wires lead the volts pursued.

To light lamps. Or silent wheels obeys
Confirming its purpose the power displays;
Each phase expressing its force a bit
From the sole source feeders deliver it.

A leaguering host in rage he views,
Treacherous primaries of crimson hues;
Whose mystic blaze in wonder told
With red or green eyes to behold.

A throbbing heart to fall and rise
In pride of power its rhyme surprise;
While guiding subdued a favorite stream
Over prosperous path tame the danger seem.

Here enduring shocks of fatal chance
From sparks of unseen circumstance;
Like phantom visions of the night
He vainly sees them melt from sight.

A potential life oft in fury beams
Unmolested in here just living streams;
A solitary task his only care
Keep things humming, the banks prepare.

But he's proud to operate, glad at the guile,
Contented he watches with conscious smile;
But if our voice is ever taught to sing
We won't forget you, poor lonely thing.

JOHN F. MASTERSON,
Local Union No. 39.

Thanksgiving?

When the frost is on the pumpkin
And the fodder's in the shock;
When the wintry winds start blowing
And your overcoat's in hock;
Then you start to wonder—
It's been done throughout the ages—
What in the bloomin' thunder
You did with your summer's wages.

(The foregoing may be out of season, but we desired to help you start your winter worrying early.)—Oklahoma Federationist.

Well, He Was, Wasn't He?

Lecturer (on prohibition)—A pail of water and a pail of beer were placed in front of a jackass and he selected the water. Why? Voice (in rear of hall)—Because he was a jackass!

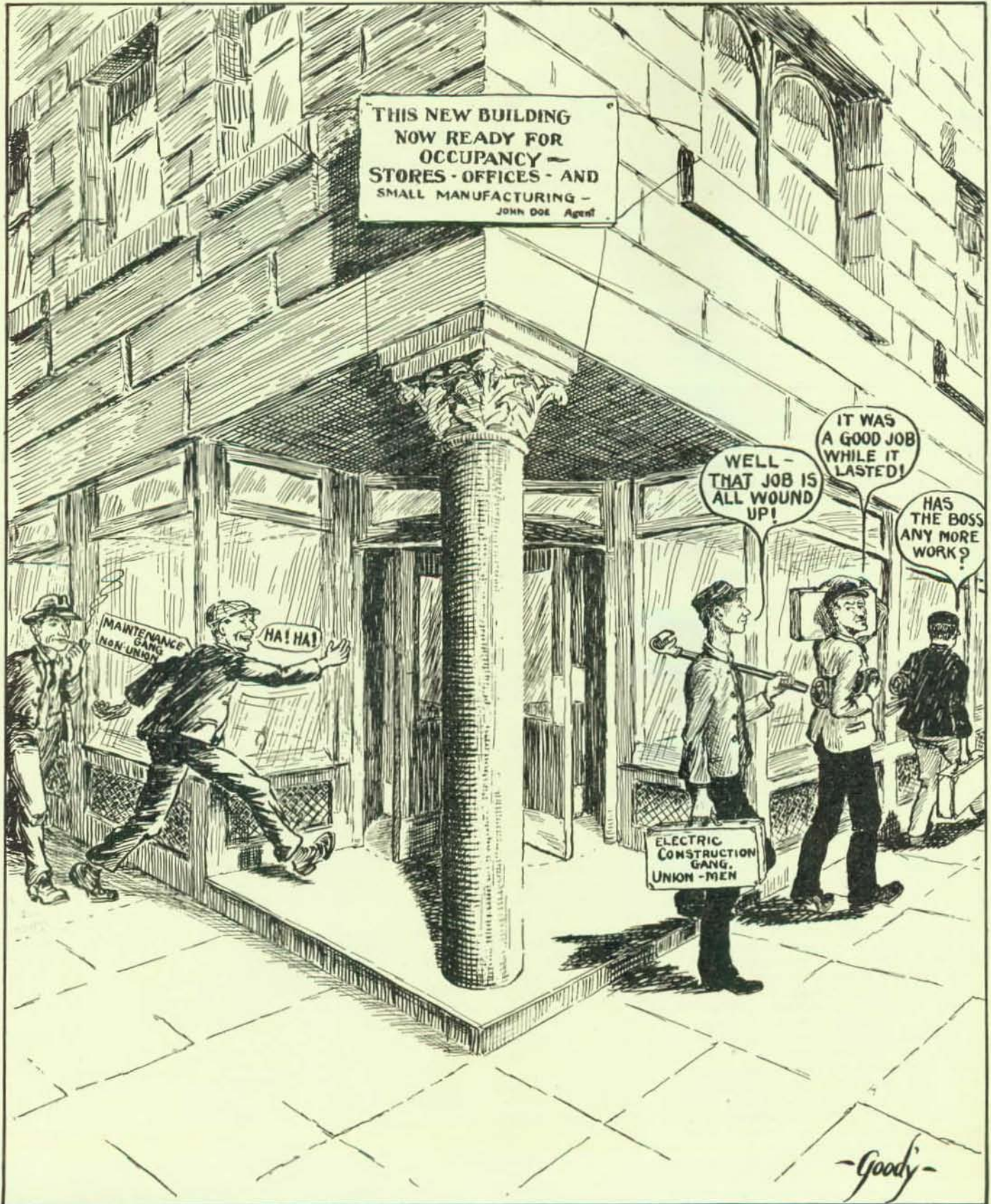
TIGHE, L. U. 75.

What Does This Mean?

Who wants to give us a snappy poem on that worthy exponent of a certain branch of the craft, ambiguously known as a "combination trouble man"?

Bowing Your Bread and Butter OUT and Rotters IN

Drawn for Electrical Workers' Journal by Harrie S. Goodwin





RADIO



THE RESISTORS OF RADIO

By AUSTIN C. LESCARBOURA, Member I. R. E., Member A. I. E. E.

PRIOR to the popularization of radio, through the advent of broadcasting, the electrician had little use for resistances running up into the hundreds of thousands of ohms, and even megohms. Yet today, a vast industry exists for the purpose of supplying resistance units in ranges from a few ohms to many millions of ohms, and in a wide range of current-handling capacities ranging from a thousandth of a watt to many watts. Radio has popularized the subject of resistance, just as it has popularized the finer side of music.

Today, most radio sets employ various forms of non-wire resistors for the simple reason that they are more compact and less expensive. Wire resistors are limited to variable resistances, such as volume controls and rheostats. Fixed resistances are represented by the metallized type, the carbon rod type, the carbon paint type, and other variations in which the high resistance is provided by a suitable coating or deposit on a glass or other support, or again by a solid carbon rod. The solid carbon rod type is widely employed. It has low cost in its favor. However, due to the fact that many radio applications call for the handling of high-frequency energy, and that, because of the pronounced skin effect, there may be a wide discrepancy between the rated resistance value and the actual resistance value when used with high-frequency energy, the coated type of resistor is preferable. In the coated type, such as the metallized resistor, the resistance value remains fixed either for high-frequency A. C. or D. C., since the energy must flow through virtually the same thin surface film because there is no solid conducting core to contend with, as in a solid carbon rod.

Persistent Professor

The metallized resistor, which is steadily growing in popularity, is a romance in itself. Some seven or eight years ago, a professor of chemistry in one of our larger universities was experimenting with the rare element Germanium, a by-product of zinc ore. At the time this metal sold at from \$8 to \$10 per gram, and its use was largely confined to medical purposes. However, the professor was bent on finding new uses for it.

In the course of his experiments, the professor soon found that germanium could be made to form exceedingly hard and practically indestructible deposits on various substances. However, even though at the time the needs of radio reception, in the matter of high resistances, were being poorly met by heavily inked strips of paper, it did not occur to him that he was working on metallized resistors. Still, he was interested in the electrical properties of these deposits or coatings, and with that thought in mind, he consulted with the professor of electrical engineering at the same university in order to have certain tests made on the electrical properties of his thin metallic films. Tests disclosed that these metallic deposits had ex-

tremely high resistance. Soon it was suggested that the requirements of radio resistances of the order of 100,000 ohms and up might perhaps be met by such metallic deposits on the inside wall of glass tubing. This form, however, did not prove satisfactory, since it was found practically impossible to control the resistance value in coating such supports; and, furthermore, the resistance was not stable, but gradually changed in time.

Films of germanium were also formed on rods of small cross-section, or filaments of glass, but these units were also found to be unstable. Meanwhile, further experiments with conducting substances of all types developed new and better resistance materials than the original germanium, until today just two colloidal solutions are employed, which have been found satisfactory for the receiver and the radio power unit resistors.

Baked in Fire

The metallized resistor has been worked out as a highly efficient product to supply the ever-growing demands for accurate yet inexpensive units. First of all, the glass support is drawn to a filament of small diameter. This glass rod is later passed through the coating bath and then through a furnace, so as to form the metallized deposit which virtually becomes part of the glass as the result of the heat treatment. Even as the filament is being metallized in continuous lengths, the resistance value is being controlled, since the metallized filament passes over mercury contacts spaced the exact distance of the solder-to-solder mounting in the ultimate resistor unit. The resistance is therefore read in ohms or megohms, so that the intricate process can be corrected in order to insure the desired resistance value for the metallized filament being produced.

The metallized filament is automatically cut into two-foot lengths, and aged for a considerable period of time. Once more the filament, in the form of these lengths, is passed through mercury contacts and tested for resistance and then sorted into piles. The filaments are then stored in steel cabinets, and this stock is drawn upon by the various licensees manufacturing metallized resistors. The two-foot lengths are cut into shorter lengths when ready to be mounted into complete units.

The mounting of the metallized filaments is an accurate operation. An ingenious centering device serves to hold the filament in position as the brass caps and glass tubing are assembled about it. Once assembled, the resistance is again tested and the resistors are sorted once more. Accurate resistance measurements are made, with ohmmeters reading correctly to 1 per cent. The scales of these meters are marked so that the needle must come to rest within certain resistance limits, otherwise the resistor is rejected. An accuracy of plus or minus 10 per cent is required by the radio standards

of the N. E. M. A. and the R. M. A. Following the tests, the resistors are labeled and placed in stock. When accuracies of 3 to 5 per cent are required, the resistors are once more tested for resistance value and carefully selected to come within the specified tolerance.

So far, we have dealt with the glass tube or "grid leak" type, employed in radio receiving circuits where little power is being handled. However, there is another and growing application of the metallized resistor, and that is for the handling of real power, such as in the voltage-divider application, in filament circuits, for grid biasing, and so on. Such resistors must be capable of handling two to five watts. In developing a power metallized resistor, the designers have simply introduced a means of increasing the heat radiation properties of the resistor. Practically the same fine metallized filament is employed. However, instead of encasing that filament in a glass tube, a special ceramic tubing, known as cerolite, is placed about the filament, in very close contact due to the tight fit. This ceramic tubing serves to dissipate the heat generated in the filament and provides a gain of approximately three times the current-carrying capacity, or 10 times the power dissipating capacity, from the same filament as the usual grid leak. The filament is threaded in the center hole of the ceramic tubing, and metal end pieces are cast on, including the pigtail leads. Where greater current-handling capacity is desired, two or more filaments may be included in as many holes in the ceramic tubing, connected in parallel. This also serves to obtain lower resistance values than are feasible with a single filament.

Non-Inductive

The metallized resistor has the great advantage of being non-inductive, as contrasted with the usual wire-wound resistor. However, of late, there have appeared new wire-wound resistors in which the fine wire is wound in sections or pancakes, making use of a ridged or finned insulator support. Adjacent sections or pancakes are wound in opposite directions, serving to cancel inductive effects. These resistors, particularly in the high values, run into considerable money—as high as \$5 for a moderately high resistance value. However, it is possible to obtain wonderfully close resistance values in these new wire-wound types, which makes them valuable for extremely accurate work such as voltage multipliers in voltmeters.

Resistance values as high as several hundred megohms, of several hundred million volts, are available in metallized resistors measuring six to 12 inches in length. In fact, one may well ask "Where does a conductor end and where does an insulator begin?" For some of these extremely high resistance values are practically the same as certain so-called commercial insulating materials. In using such high resistance

(Continued on page 542)

CONSTRUCTIVE HINTS

Porcelain Insulators

Porcelain is a vitreous homogeneous mixture of clay, flint and feldspar. Porcelain which is used for electrical purposes differs from general porcelain ware only in the proportion of the three base materials used, and in the refinements of its manufacture. These differences, however, make possible a porcelain which meets the highest mechanical and dielectric requirements.

The raw materials are finely ground, accurately proportioned and intimately mixed in a liquid state. The mixed material is then reduced to a plastic state by filtering under pressure. Electrical porcelain is manufactured by three processes, the casting process, the dry process and the wet process.

Dry Process—After filtering, the material is partly dried and ground to a crumbly condition, in which the granules are the size of rice grains, or smaller, and in which there is just enough moisture so that a handful of the material will cling together when squeezed. The material is then pressed into moulds of the required shape. The pressed shapes are dried, finished to dimension and glazed. Dry process porcelain can be moulded quite accurately into complicated shapes.

Casting Process—Porcelains of high dielectric strength and of complicated form can be made by pouring the liquid material into multipart plaster of paris moulds. The cast piece is removed from the mould after it has stiffened sufficiently to permit handling and finishing without distortion. It is then thoroughly dried and glazed. Plaster of paris is a particularly useful material for moulds because it accelerates the drying of the porcelain body by its absorption of moisture.

Wet Process—Blocks of plastic material about the consistency of putty are worked into the desired shape, and placed into plaster of Paris moulds. The surface not in contact with the mould is then worked to the desired shape by machine forming and pressing. The piece is removed from the mould after it is partly dried and stiff enough to handle. The surface which was in contact with the mould during the pressing operation is finished to accurate dimensions. The body is then thoroughly dried and glazed.

Wiring Formula

Ohm's law is practically the basis for the various formulae in general use for determining the proper size of wire to use to carry various currents. It is essential to know the amount of current expressed in amperes, the distance, and to decide upon the loss to allow in transmission; the best rule is as follows:

The cross section (CM) of the necessary wire is found by multiplying twice the distance one way (2D) by the amount of current expressed in amperes (C) and this by the resistance of one mil-foot (10.7) and dividing by the loss in transmission expressed in volts (v),

$$\text{or CM} = \frac{2D \times C \times 10.7}{v}$$

$$\text{or CM} = \frac{D \times C \times 21.4}{v}$$

Depth of Pole Setting

In sandy or swampy ground, oil barrels or casks set in the ground will materially assist in securing substantial pole foundations. The following specifications are recommended for the depth in feet of holes:

Solid Ground			Soft Ground		
Line (Height)	Poles (Depth)	Corners	Line	Corners	Solid Rock
22	5	5	5	5	3
25	5	5½	5½	6	3
30	5	5½	6	6½	3½
35	6	6½	6½	7	4
40	6½	7	7	7½	4
45	6½	7	7	7½	4½
50	7	7½	7½	8	4½
55	7½	8	8	8½	5
60	8	8½	8½	9	5½
65	8½	9	9	9½	5½

Guy stubs should be set not less than 7 feet in any soil except solid rock.

Cedar Poles for Electric Light Work

Height Feet	Size Top Inches	Average Wt. Lbs. Each	No. of Poles to a car
25	5	200	150
25	5½	225	130
25	6	250	100
28	7	400	80
30	5	300	110
30	6	350	90
35	6	550	100
35	7	650	90
40	6	800	80
40	7	900	75
45	6	900	70
45	7	1,000	65
50	6	1,200	55

Wind Pressures

Velocity	37	53	65	75	83	91	105	119	130
Pounds per Sq. Ft.	5	10	15	20	25	30	40	50	60

The pressures given above are such as would be exerted against a flat surface set perpendicularly to the direction of the wind. For a cylindrical surface, like a pole or wire, the effective pressure is two-thirds of what it would be for a square surface of the same area as the cylinder. It is considered that an allowance of from 20 to 30 pounds per square foot of area for pole lines is ample. The above table was calculated from Professor Langley's formula, $P = .0036V^2$, in which P is the pressure per square foot of surface in pounds, and V is the velocity of the wind.

General Construction Rules

Size of Holes. The holes should be large enough to permit the free entrance of the poles, and should be full size at the bottom so as to admit of the use of tampers.

Tamping Pole Holes. All pole holes, except those in very hard gravel or rock formations, should be tamped so thoroughly that the necessity of hauling away excess dirt is obviated.

Protecting Poles. Where corner poles or other poles are exposed to injury from whittling, pole butt should be well painted and heavily sanded. If this is not sufficient in any special case, the pole butt should be

wound with No. 10, galvanized wire, spaced one-half inch apart, painted and sanded.

Painting Poles. The top and gans of all poles should be painted with one or more coats of approved paint. All poles which are protected by strain plates or shims from the cutting of messengers or guys, should be painted with one or more coats of approved paint on the space occupied by the strain plate.

Facing Arms (city construction). At long spans the cross arms should be placed on the side of the poles away from the long spans. Arms on poles should face the originating source of the lead, or face to face, depending on the general condition, except corner pole; then it should face the corner. At the terminals of a lead, the last two poles should face away from the originating source. On corners, arms should face the point of intersection of curb lines, thus facing each other. First arm each side of the corner should ordinarily face the corner.

On Curves. Arms each side of center of curve should face the center of curve.

Location of Poles and Anchorages. Special attention should be given to location of poles, where the ground washes badly, where there are cuts or excavations, and along the banks of creeks or streams. Do not locate poles along the edges of cuts or embankments.

Electrical Units

Volt: Such an electromotive force as would cause a current of one ampere to flow against a resistance of one ohm. Such an electromotive force as would charge a condenser of the capacity of one farad with a quantity of electricity equal to one coulomb.

Ohm: The practical unit of electric resistance. Such a resistance as would limit the flow of electricity under an electromotive force of one volt, to a current of one ampere, or one-coulomb-per-second.

Megohm: 1,000,000 ohms.

Ampere: The practical unit of electric current. A rate of flow of electricity transmitting one coulomb per second. The current of electricity which would pass through a circuit whose resistance is one ohm, under an electromotive force of one volt.

Coulomb: The practical unit of electric quantity. Such a quantity of electricity as would pass in one second through a circuit conveying one ampere. The quantity of electricity contained in a condenser of one farad capacity, when subjected to the E. M. F. of one volt.

Farad: The practical unit of electric capacity. Such a capacity of a conductor or condenser that one coulomb of electricity is required to produce therein a difference of potential of one volt.

Microfarad (Mfd.): One-billionth of a farad.

Watt: A unit of electric power. A volt-ampere. The power developed when 44.25 foot-pounds of work are done in a minute, or 0.7375 foot-pound of work is done in a second.

Joule: A volt-coulomb or unit of electric energy or work. The amount of electric work required to raise the potential of one coulomb of electricity one volt. Ten million ergs.

EVERYDAY SCIENCE

Manufactured Gas Industry in Canada

The manufactured gas industry in Canada serves approximately 500,000 customers, an increase of about nine per cent the past 12 months. The investment in plant and facilities is \$62,000,000. Approximately 16 billion cubic feet of gas were manufactured during 1928, an increase of approximately eight per cent over the preceding year.

Sun Gods and Ultraviolet Rays

Sun worship, in the light of modern discoveries, was not so foolish after all. The ancients knew that the sun was essential to the healthy development of plant and animal life. Consequently, temples were built and sacrifices made so that the sun god would smile and shine. Today there is in effect a reincarnation of the ancient Ra. Man and his science have brought forth an efficacious, though synthetic, sun god in the production of ultraviolet radiations. By means of the electric arc it is possible now to obtain radiations which, for practical purposes, approximate sunlight. They have a very definite therapeutic value to mankind. Their curative and stimulating effects have been thoroughly demonstrated for some diseases and the medical fraternity is administering "light" treatment quite extensively. Even the normal healthy person has found that consistent exposure under the sunlight lamp is good insurance against common cold and "flu."

However, the use of ultraviolet lamps by the public is far from general because of lack of knowledge of what the so-called ultraviolet ray will do. There is also the suspicion that the high priests among the modern sun-makers are "holding out on" the public that they may profit themselves. It is true that much still remains to be learned of these radiations and that their intemperate or careless application may prove rather painful to the individual. But there is equipment now available which will produce the same effect as sunlight and from which radiations of undesirable or dangerous wave-lengths have been eliminated. Most of this equipment is relatively expensive; still, it is not beyond the reach of moderate incomes, particularly if the expenditure spells health. By use of the ultraviolet lamp it is entirely possible for a person to "take his sunlight" with no more difficulty than he regulates his diet. Results indicate also that these rays, which impinge upon the exterior of the human anatomy, may be infinitely more beneficial than many articles of diet which find their way into the interior. A little more synthetic sun worship can do modern man a lot of good.

More Electric Power Produced With Less Fuel

The marked increase in efficiency in the use of fuel in the production of electricity in the United States, noticeable during the past 10 years, continued during 1928.

During the year, a total of 53,154,000,000 kilowatt hours of electricity was produced by fuel power. This was an increase of over 2,800,000,000 KWH over 1927, or 5.6 per cent. To produce this electrical power, the industry consumed 1.3 per cent less

coal, amounting to a total of 538,000 tons. There was an increase, however, in the use of fuel oil, amounting to about 375,000 barrels, and in natural gas, amounting to about 15 billion cubic feet. Reduced to a common basis of the equivalent of coal, the increase in fuel was only 1 per cent, as compared with an increase in output of 5.6 per cent.

The average fuel consumption for the year per kilowatt hour of electricity produced was 1.76 pounds, a reduction of 8/100 of a pound. In 1919 the average consumption of fuel per kilowatt hour of electricity produced was 3.2 pounds, so that the improvement in 1928 represents a decrease of 45 per cent in fuel consumption.

Creditable though this increase in efficiency may be, it does not materially affect either the cost of production of electricity or the price which must be charged to the consumer. Coal costs electrical public utility companies from two to six dollars a ton, depending upon the location of the utility with reference to the source of fuel supply. On an average of four dollars a ton, the fuel cost per kilowatt hour in 1927 was about 3.78 mills and in 1928 it was 3.52 mills, or a saving of about one-quarter of a mill per kilowatt hour.

Anglo-European Telephone Now Well Developed

Telephone service between England and continental Europe was inaugurated in April, 1891, when two circuits were completed between London and Paris. It was not until 12 years later, in 1903, that communication with Belgium was established with two London-Brussels circuits.

During the war, the telephone repeater came into existence in the United States, where it was perfected by engineers of the American Telephone and Telegraph Company for use in the first transcontinental line, uniting the Atlantic and Pacific Coasts, which was then being completed. The development of the telephone repeater at once attracted attention in Europe, where it was used on an extensive scale during the war by the Germans to maintain communication between Berlin and Constantinople and with the German headquarters in Macedonia, Rumania and Russia, and by the Allies for communication between their headquarters in France and Italy; and in Great Britain for the maintenance of communication at a critical time between London and the military headquarters in the north of England and Scotland.

Following the war, the first task was that of providing sufficient plant to meet demands for internal services, but by 1922, extensions of international services began, with the result that in September of that year an Anglo-Dutch service was opened, with two circuits between London, Amsterdam and Rotterdam. Since that time communication with the continent has increased to such an extent that there are now fifty-seven Anglo-Continental circuits in operation as compared with 13 in August of 1914.

On the Anglo-French, Anglo-Belgian and the Anglo-Swiss circuits, the French language is employed for operating purposes, but on the other routes a considerable amount of English and German is used.

The operators for the most part, are required to speak more than one language.

Forty Degrees Below Zero

A manufacturer of domestic electric refrigerators recently completed a special unit for a rubber manufacturing plant. This refrigerator is guaranteed by the manufacturer to maintain a temperature of 40 degrees below zero.

The construction of the unit is not essentially different from that of the regular output of the company with the exception of the thickness of the walls of the refrigerator itself. The refrigerators made for domestic trade have approximately three inches of cork insulation all around, whereas this special unit for 40 degrees below zero has both walls and doors lined with 10 inches of solid cork.

This special refrigerator is to be used by the rubber manufacturer for testing automotive equipment which will be sent into the polar regions.

Use of Electricity Steadily Increases—Output Will Exceed 100 Billion Kilowatt Hours in 1930

The final figures on the output of electricity in the United States by public utility companies during 1929 indicate a total of 97,294,000,000 kilowatt hours, an increase of nearly 9½ billion over 1928 and an increase of 17 billion over 1927. So far this year, there has been an increase of about 4 per cent, indicating a consumption for the year 1930 of considerably in excess of 100 billion kilowatt hours.

During 1929, the industry added a total of 850,000 new customers bringing the total up to 24,050,000, of whom approximately 20,000,000 are household users. The use of electricity by industry increased 10 per cent and household consumption 16 per cent.

Approximately 68 per cent of the population of the United States now live in electrically wired homes; 9,600,000 homes having been connected with electric service for the first time during the past seven years.

During the 15-year period, between 1912 and 1927, while the population of the United States was increasing 24 per cent, the amount of electricity used increased 626 per cent; the number of customers increased 465 per cent; and the number of people living in electrically wired homes increased 520 per cent.

Electric Flat Iron Most Used Appliance

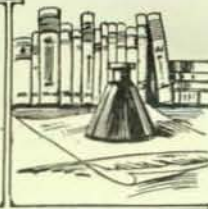
Of all electrical appliances sold in the United States each year, the electric flat iron leads all others, the number sold in 1929 being 3,150,000, an increase of 5 per cent over the previous year. It is estimated that out of a total of nearly 20,000,000 electrified homes in the United States, 94 per cent use electric flat irons. Electric toasters come second, the total for 1929 being 1,540,000, an increase of 10 per cent over the previous year. Vacuum cleaners totaled 1,312,000, and clothes washing machines 1,019,000.

Coffee percolators totaled 1,295,800, of which 800,000 were made of aluminum and the remainder of brass, copper plated.

A total of 178,000 electric ranges were sold, and refrigerators for domestic use totaled 630,000.



CORRESPONDENCE



Broach Directs Coast Locals to Withdraw

H. B. Stallecop,
316 Labor Temple,
Seattle, Wash.

Dear Sir and Brother: I'm very sorry for this delay. I've been away from the office and your letter was forwarded.

Article XVIII, Section 5, of the revised constitution reads:

"L. U. shall affiliate, or shall not affiliate, with Central Labor Unions or Building Trades Councils, or State or District Bodies, or Associations, as decided by the I. O."

The purpose of this law was to give the International power to act in any such situation to protect or advance the interests of our local unions and the Brotherhood.

It's quite agreeable that your local union be affiliated with the Washington State Federation of Labor and the Seattle Central Labor Council.

As to the Pacific-Northwest Conference of Electrical Workers, you say:

"If in your judgment this conference should not carry on as and under the present plan, we do not wish to contribute further. The other locals in the conference feel the same way and a decision from you at this time will help all the locals in the conference."

When this conference was formed its by-laws were sent in for approval. In my reply to the secretary of the conference I stated, June 4, 1930:

"I see the preamble of your constitution pledges your conference to the enactment and enforcement of just legislation. Article VII also provides that the executive board shall constitute the legislative committee of the conference. From this it is clear that you have formed the same kind of legislative association which has been formed in a number of states by our locals. It is on this assumption, and with this understanding, that your constitution has been approved."

The conference laws, in themselves, appeared all right. But the letter of the secretary caused me to clearly see that once organized, the conference intended going beyond what their laws outlined. This is why I stated that the laws were approved on the assumption, and with the understanding, that the organization was to be one for legislative purposes.

It was seen that the plan was to set up an organization like the old district councils, to operate along the same lines as the International—with officers, conventions and representatives in the field who would act in the same capacity as the representatives of the International now act.

And since the Brotherhood constitution at that time allowed the formation of such organizations, the International had no right to attempt to deny local unions the right of affiliation. We could only wait for developments and a new law.

I did not feel at the time that it was proper or necessary to point out the history, the conflict, division and trouble that followed in the trail of the old district councils. The laws recognized them. I felt

READ

Toronto bristles with activity, by L. U. No. 353.

Radio workers advance, by L. U. No. 828.

A Hero recognized, by L. U. 1037.

St. Louis tries rotating work plan, by L. U. No. 1

The union advances night baseball, by L. U. No. 145.

How one auxiliary observes Labor Day, by L. U. No. 84.

The right group spirit, by L. U. No. 308.

Railroad electricians think, by L. U. No. 817.

Troy pioneers on the five-day week, by L. U. 392.

And many other incisive, earnest, readable letters touching the daily problems of 100,000 electrical workers.

you on the Pacific coast had enough experience to know. I felt you were acting in good faith and did not question your motives, and do not now. Besides, we wanted to be friendly.

I honestly felt that the locals themselves would soon see the dangers involved. In addition, I felt the locals would not pay a per capita tax of 25 cents a month a member to the conference long enough to allow it to function in the manner the secretary has stated. For this reason I was convinced the move would soon die and pass out of existence, the same as those of the past.

This belief was confirmed by the secretary—H. L. O'Neill—in his letter to the affiliated locals, August 4, when he said he was pessimistic "in regard to the slowness of some of the locals in sending in their per capita."

The very nature of such organizations does not let them operate successfully in the manner outlined by the secretary. If we are to judge by all past experiences, the affiliated locals simply will not continue for a very long period to pay the tax necessary to keep a sufficient number of representatives or organizers in the field to satisfy the locals.

Neither can such representatives or organizers produce enough results to satisfy all the locals any more than the International can produce, on its revenue, all the results the members feel it should. Then come the usual differences among the members as to who the representatives and organizers of the conference or councils should be. Natural dissatisfaction sets in, and soon the locals, one by one, question whether their money is being well spent. Then, one by one, they stop paying the tax.

In fact, this appears already to have occurred. The letter of the secretary of the conference, August 4, complains about this. Most locals, in my opinion, already want to stop payment of the tax. And regardless of

any action by me, the move would die. But you ask for a decision and you will get it.

Such a conference or council has no way to compel a local to continue to pay taxation. It has no such powers of discipline and forms of benefits and affiliations enjoyed by and through our International. Every informed student of the labor movement knows that if the International did not have these things it could not long exist. No International in this day and time could long exist by depending solely upon voluntary actions and taxation by its local unions, as you must know.

And when any group or organization—no matter what name is used—attempts to duplicate or perform work of the International—when there are independent representatives and organizers in the field attempting to act in the same capacity as International representatives and organizers—when there is such scattering of authority—then there is bound to be conflict, division and danger of rebellion. This is only natural. Our history—and the history of the whole labor movement—over a period of many years well proves this.

This International organization, as you must know, is not as strong as we should like to see it—and I am just as dissatisfied and displeased with certain weaknesses and shortcomings as anyone. But in our anxiety to overcome these we are certainly not going to take any chances in allowing it to hit the same rocks and retrace the harmful history of the past, if we can possibly avoid it.

During such periods as we are now going through, unions grasp at almost anything which might seem helpful. Little do they think of the fire of experience we have gone through. Little do they realize that their desire to get all often causes them to lose all, or to weaken themselves materially.

Therefore, your local union is directed—and the others affiliated with the Pacific-Northwest Conference of Electrical Workers are being directed—to withdraw such affiliation within 30 days from this date and to make no more payments to such organization.

All good wishes.

Sincerely,

H. H. BROACH,
International President.

Chicago Men Keep Abreast of Technical Developments

By J. H. BRENNAN, L. U. No. 134

In this age of progressive electrical research and with new devices and new innovations constantly being produced in an already large field, one of the major problems of our officers, both International and local, has been to provide educational facilities to educate our men and bring them up to a standard of electrical and mechanical proficiency that would be second to none. When we can convince the employers in any branch of the electrical industry as to the competency and efficiency of our members by actual demonstration, one of the major contentions in negotiating new agreements will be disposed of. When we can prove to the

employers that our members can not only equal but surpass in ability and efficiency non-union men that they now employ; when the I. B. E. W. can guarantee and underwrite the electrical and mechanical ability, both theoretical and practical, of its members, we will be in a position to offset the arguments generally advanced by the employers that only their highly technical and skilled experts can properly and efficiently install and operate their intricate and costly electrical apparatus.

The obvious solution of our problems is education and our members must realize that in this new day only the competent can survive.

Some months ago one of our business representatives in making his report concerning the installation of talking pictures and his demand that only our men be employed on this installation, was met with the curt rejoinder that union men had not the experience and therefore were not competent to install this highly technical apparatus. While we had quite a number of men competent to handle the situation, a constantly enlarging field convinced our officers that quick action was necessary to save the situation. Arrangements were made to institute a class of journeymen in radio, television and orthophone installation. The following letter is the best testimonial as to the successful outcome of their efforts:

To the ELECTRICAL WORKERS JOURNAL:

This is the student body of the radio class of Local No. 134, broadcasting our closing exercises. We are bringing to a close a nine month intensive course on the "Theory and Practical Application of Radio." This course has been very instructive and interesting and we feel our time could not have been spent more profitably otherwise. The course started the first part of last October and concluded June 5, 1930.

We were very fortunate in securing Mr. J. N. Becker for our instructor. He is an eminent radio engineer in Chicago. We give great credit to Mr. Becker for his clear and painstaking way of explaining the various phases of the subject, as well as exercising great patience in answering questions, invariably after each lecture he was under a barrage of questions.

The course was quite complete as we were well grounded in the theory and operation of all principal receiver circuits from the lowly crystal to the more modern super heterodyne and screen grid circuits. We also went into much detail in the study of various radio tubes and their operation. This entailed making charts and graphs to determine the grid voltage, plate current curves of tubes we had under observation on the test board.

Our next step was to hold clinics over some broken down radio sets as this gave us practice in "shooting" and repairing trouble.

Brother Gruno brought along his tube analyzer and gave a very good demonstration on how to locate trouble.

The subject of transmitter stations came next and after getting all the lecture work on the matter we visited several broadcasting stations while they were in operation. We found that our advance study made it very easy to trace the circuits and know the why and wherefore of the equipment in these stations.

The classes were held in the Washburne School but later, on account of us being so brilliant we were transferred to the Crane College, so now the boys all boast of being to college and are learning Rah Rah yells and are acting collegiate in general.

We wish to thank Brother Murt Enright for all the time and effort spent in organizing the class and for procuring and sign-

ing our certificates. We will look to "Murt" to organize a code instruction and advance radio class. Upon learning the code it will enable us to take our government examinations for radio operator's license.

The following men have successfully completed the course of instruction:

Joseph P. Carney, William H. Clark, Ed. J. Fenelon, John F. Ference, Gene S. Ferrier, Charles Goodell, Peter Hermesdorf, Robert Lewis, William A. Roach, Mac Ballock, F. Adolph Schulze, A. Steinmetz, Kasimir Carr, Franklin Schoer, William Roch, Ted Fuchs, Arthur O'Grady, C. J. Seppi, William Kessler, Jacques Remo, William J. Schell, William G. Gruno, William Renehan, Edward Murphy.

This is Gene Ferrier announcing and will now sign off this period of broadcasting and will be on the air next autumn.

Hoping schools of instruction or instructors will be instituted by all locals throughout the Brotherhood, I remain

Yours fraternally,

J. H. B.

L. U. NO. 1, ST. LOUIS, MO.

Editor:

Because of the lack of employment in St. Louis, the executive board of Local Union No. 1, with the approval of the International Brotherhood, has devised a scheme which they hope to enforce during this strenuous period. It is a scheme which will equalize the work and give every wireman an opportunity to be employed at least part of the time.

All Class A wiremen will receive work through the office of the business manager. Those out of employment are requested to register and they will be sent on jobs according to the order their name appears on the register. When a job is completed each wireman must report at the office and re-register for the next one.

This scheme seems to be a very fair one, inasmuch as it will give every one an opportunity to work, which heretofore has not been the case. Contractors have been giving steady employment to favored men, while others, ably fitted for the work, have been unemployed for months at a time.

This should give the old man a long-hoped-for chance. The old men of today were the young men of some 25 years ago. They organized and fostered the union movement. Now they are gradually being eliminated from the ranks of the workers because younger men can do as much or more work than they. If these younger men are as good union men at heart as those who nurtured Local Union No. 1 through all her years of strife, they will cooperate in every way to aid the old man. Nevertheless Local Union No. 1 must stick together and it is up to the young men to see that the old men receive an equal chance and the opportunity to earn a living wage.

ROBERT B. MILLER.

L. U. NO. 7, SPRINGFIELD, MASS.

Editor:

We have received what we have been waiting for, the new constitution, and it will take a couple of readings to get it all into our heads, but I feel sure it will be satisfactory to the majority, but no matter how good it is you will always find some one that it will not suit, for I can imagine there will be quite a little discussion on it in the locals for one meeting at least.

I was saying in my last letter I was hoping to be able to notify the Editor to put Local No. 7 on the five-day week class, but I will have to delay it until a later date. It is only a small sum of five dollars that is really

stopping us from getting it and that is quite a lot of money these hard times, but I hope it won't take long before we have everything running good, for we have quite a hard working committee talking to the contractors.

I really don't know how hard the other locals have been hit by the golf bug, but Local No. 7 has been hit real hard, for that is one of the talks before and during the meeting and the hole in one is a common occurrence with some of the bugs. They put up an awful kick when you ask them to stay a little longer at a meeting. They say it is too warm, but they will spend all Saturday afternoon and Sunday, chasing a little white pill for about five miles in the boiling sun and think nothing about it.

But still the miniature golf courses have come in real handy as we have had our men do all the lighting on the course and make quite a little work for the members and it seems to be going strong up in New England and they seem to be putting more in every week.

We nearly had another election last meeting to fill the place of our organizer, Brother Kenefick. Brother Kenefick asked us to postpone it until our next meeting, but it falls on Labor Day, so I guess they will have it another day, so I will have something to write in my next letter to the JOURNAL for there are five candidates running for the job. We will have some excitement, but we hope the best man will win.

E. MULLARKEY.

L. U. NO. 17, DETROIT, MICH.

Editor:

We are herewith enclosing copy of resolution adopted by Local Union No. 17, I. B. E. W., at their last meeting held on June 16.

Would kindly ask you to publish this resolution in the next issue of the JOURNAL.

Whereas the tendency in modern industry has been to relegate to the scrap heap, workers who have reached the age of 40 and 45, and

Whereas in the particular industry that the members of Local No. 17, International Brotherhood of Electrical Workers are employed, men are denied employment after reaching the age of 40, and

Whereas the pay received by men engaged in this industry is not adequate to take care of them after they have reached the age of 40 or 45, and

Whereas the various political subdivisions of this state have in the past attempted to give some relief to aged workers who are unable to take care of themselves by the establishment of poor houses and poor farms, and

Whereas these institutions are not always operated for the best interests of the inmates and the average person has an aversion to enter one because of the stigma connected with poor houses, and

Whereas experience has taught us that an aged worker can be sustained by a pension more economically than he can be taken care of in a poor house, and

Whereas the pension will avoid the necessity of separating old couples and will give relief to those entitled to receive the same without destroying their self-respect, and

Whereas there is in existence in the state of Michigan a move to establish the old age pension; therefore be it

Resolved, That Local No. 17, of International Brotherhood of Electrical Workers endorses the principle of old age pension and pledges its members to work and support for such legislation, and be it further

Resolved, That copies of this resolution be forwarded to the Michigan Old Age Pension League, to Jerry Buckley of Station WMBC, to the I. B. E. W. JOURNAL, and given all publicity possible.

WM. FROST.



Making the DC to AC change-over at the Charles Pfizer Company Chemical, Brooklyn. Work under direction of Assistant Chief Engineer McLain, Foreman R. A. Litchfield. Local Union No. 3's job.

L. U. NO. 21, PHILADELPHIA, PA.

Editor:

Strange as it may seem there seems to be a rush on for applications for membership in Number 21 about this time. A lot of the "pole cats"—like plenty more people—have been on a forced vacation for several weeks due to the Wall Street outfit giving the works the axe.

We've landed a couple jobs here with the "scale" and some overtime added to it, makes wages, and some of "The-ride-on-the-gario" while the other fellows push it, heard about it and now they "want in."

We're boosting the entrance fee after the first of September, so if the riders still want in after then they'll have to dig a little deeper for the necessary what it takes to make it.

"Red" Sargent's pushing the "pole cats" on the Pennsy job here, with the assistance of "Blink" MacLaughlin.

There are several contractors hooked-up with the Pennsy electrification job, and some of them are rated as O. K., and some are N. G. N. G. means no good—that is what is said about them, but I differ with that statement, however, for it is not the fault of the contractor or utility corporation when the employees don't get what they think they are worth. It is their own fault. Men on any job make it just whatever it happens to be. If it is no good, it is their own fault. Everybody knows these days there are in existence trade unions of craft organizations, and if they try to get by without organization they are out—that's all, and have to take what is handed to them and learn to like it.

JIM ASHTON.

L. U. NO. 28, BALTIMORE, MD.

Editor:

This month our mind is mostly occupied with the new constitution or as much of it as we've digested from the JOURNAL—we haven't as yet received our copy of the constitution.

We fear to express an opinion as yet, for we almost feel like a person who suddenly finds himself in strange territory in the dead of night and hates to venture forth for fear of meeting with an accident. We will, however, attempt to discuss very briefly portions picked at random.

We note that portion or section which grants considerable power to the president, among which is that of levying assessments. This may or may not prove to be extremely essential and may prove to be a good thing. Naturally there is plenty of opportunity for abuses to creep in, but we don't feel unduly alarmed, for we can't recall to mind any abuses up to the present time of other portions of the constitution.



ARIZONA, MONTANA AND WYOMING—PLEASE TAKE NOTICE—EAST IS WEST. BROTHER DANIEL BYRNE, LOCAL UNION NO. 3, NEW YORK CITY, IS AN ARDENT FOLLOWER OF HORSEMANSHIP. HE IS SHOWN HERE WITH HIS MOUNT "COMMISSIONER." BOTH ARE FAMILIAR AND WELL-KNOWN FIGURES ON THE BRIDLE PATHS OF BROOKLYN.

The sections that call for bimonthly meetings and the adjournment at 11 p. m. are extremely good, for we found by experience that this tends to make meetings more business-like and much more interesting, also making one look forward with anticipation for the next meeting. Attendance is greatly increased thereby.

Great power is now vested in the executive board and it seems as though the paramount body is not quite where it was. Of course, we can't say how this will pan out.

Naturally portions of the new constitution are so new and some so radically different from what we've always been accustomed to, we confess we're a bit bewildered. We realize though, that after we've adjusted ourselves a bit and jump into the new routine of things we may actually find things entirely to our liking. Not that we're really opposed to all these new innovations. We can better describe our feelings by the analogy of a man after being in one job, say for 20 years and getting along fairly well in so far as working conditions and pay are concerned, suddenly finds himself without a job and forced to go into the employ of a new concern whose conditions are somewhat similar as the previous one, but at the same time has quite a few new departures in force. So much for this.

We are greatly elated to note that our former business representative, Edward D. Bieretz, has been moved another step forward and is now direct assistant to the International President. We offer our heartiest congratulations and our sincerest wishes for much greater success. Incidentally we must mention that Brother Bieretz is also somewhat of an inventive genius and has been granted patent papers for a semi-automatic transmission which, we understand, is a great improvement even over that of the latest type now used in cars.

We also wish to congratulate Brother A. Wilson, of Local No. 349, Miami, for his

promotion and take great pleasure in offering him our heartiest best wishes for continued success.

Speaking locally can say that Local No. 28 is still stepping along, progressively speaking. When improvements are completed our hall will be much more inviting and a better place to meet in. Ventilation, seating arrangements, cloakroom, water cooling system all go to make things more comfortable when brought up to date.

The baseball team is performing to perfection. Soon, barring any accidents, they will be at the head of the Federation of Labor League. Last week Angne Knoedler suffered a bad accident incurred when sliding to base and fractured his ankle. This put somewhat of a crimp in the game and the boys lost a double header to the sheet metal boys. The team is well managed by none other than Harry Cohen, who deserves great credit. No foolin', the boys are not only good, but they're great. They deserve great credit for their sacrifices in giving up their Saturday holidays and playing for the glory of Local No. 28.

We can report that in our midst, after a long, lingering illness, Brother Leslie E. Givens passed out of this life at Johns Hopkins Hospital. Brother Givens was from Tennessee and his case was taken care of by Local No. 28 as he was in great need also his wife and child. Local No. 28, as usual, did her share and saw that the remains were shipped back to his native home town.

Brother Fred Geese passed away in the City of New York. We extend our sympathies to the bereaved.

Our sick committee, headed by Cliff Higgins, deserves great credit for its good work in all these cases where Brothers find themselves helpless and in need of funds and medical care.

ROBERT S. ROSEMAN.

L. U. NO. 46, SEATTLE, WASH.

Editor:

Having read and reread the changes to our constitution, I can't help but feel that now dear old Grandma Anna Conda of Local No. 200, can again sleep in peace. Kinda looks as though their district secretary has a bad case of cold doggies and has decided to quit.

Brother Broach and the constitution committee are to be complimented for their efforts as this is surely a step in the right direction, a step which had to come sooner or later if we were to keep up with the new order of the day. Relegated to the past is the so-called fraternal method of doing business; from now on under the able guidance of Brother Broach we shall progress rapidly.

Work here is picking up slightly but is still far from what it should be; however, if we can save a few more nickels and dimes we will be able to carve the old bird when turkey time comes. So many have said that this is going to be a tough winter; let's hope the bird isn't.

Well, Mrs. Simpson, you sure are there as press secretary for the Ladies Social Club. The boys are all proud of your letters so keep up the good work. You are a good cook and a good press secretary, but as a press secretary I make a good cook.

Pick Ups of the Day: Oscar Olson using his new sprinkling system for a shower bath. Frank Green losing his bet. George Brunner proud of his new youngster, and Cliff McClelland back with the bunch.

"LINDY."

L. U. NO. 86, ROCHESTER, N. Y.

Editor:

We agree wholeheartedly with Brother Broach that a local union has passed out of the "fraternal state" and is now a cold-blooded business organization. For instance, it has been figured out roughly that our local here does, as a business organization, about \$500,000 worth of business yearly, that is, that our members draw that much money if they all work steadily throughout the year. We aren't getting all of that \$500,000, due to the fact that heretofore all our work was thrust upon the shoulders of our business agent, with the result that he had so much to take care of that he simply could not give do justice to it all. The result was that the work was slipping away from us, job by job, until it got so that our members had to start floating all over the country looking for work. I myself have worked in my home town only about eight weeks in a year and a half and there are about 70 more like myself.

I might add that as usual we are having no help from the local contractors, even when these reforms can help them. But we are forging ahead regardless of the indifference of some of our members.

Since last April our meetings have jumped in attendance. Instead of 35 or 40 members coming to the meetings to visit each other and leave only a few to try to conduct a meeting we now have close to 200 members attending our meetings and they are all on their toes.

I believe one reason for it is that Brother Broach has instilled in us a new lease on life.

Since the war the Brotherhood has just been drifting along like a ship without a rudder and now we have that rudder in the form of Brother Broach, and, boys, if you will just give him a chance and bend your shoulders to the task and help him, I feel sure that he will guide the ship into port and the Brotherhood of Electrical Workers will be the strongest and best managed business and labor organization in the country.

I feel that I cannot too strongly urge the Brotherhood to read their JOURNAL from cover to cover. It concerns you, Brothers, each and every one of you. It is your business, your bread and butter, and while Brother Broach is writing articles for the WORKER read them carefully and don't jump at conclusions; think out each statement he makes, weigh it carefully and then see if he isn't speaking truth and logic.

I would like to take this time to say Hello! to all the boys I met while in Baltimore on the Western Electric job. A number of the boys of L. U. No. 86 have asked me to remember them to each of you that they met—so many in fact that space would not permit putting all the names down here—but rest assured, all of you boys who met our boys from L. U. No. 86, that we all cherish memories of your friendship. If any of you want the addresses of any of the boys you met down there write in care of myself at the address below and I'll see that your requests are taken care of. I know I didn't get all the addresses that I would like to have myself.

I see that congratulations are in order down in Paterson, N. J., according to our June WORKER. Congratulations, "Bob" Kennedy, and to "Jimmie" Waldron, standing in the picture at the foot of the page, "Hello, kid!" Do you still sport that moustache? And "Bill" Carter—pardon me, Mr. Carter—hurry up and answer my last letter to you.

I wonder if Brother Thomas O'Neil, of L. U. No. 134, Chicago, and Brother "Jack" McCarthy, of L. U. No. 3, New York City, are still walking around burning up people's good, decent overalls.

I want to say to all the boys who were in the pictures I took on the job in Baltimore to just be patient and you will all get a set. I have about 22 sets to make.

Yes, Rosie, of Local Union No. 28, Bert Bullen said he remembered the "pile." "Bill" Hartung was in Geneva, N. Y., last we heard. His card is out of Binghamton, N. Y., now, although he was in L. U. No. 86 for years.

Brother Tilley wants me to thank Local No. 28 for him again for the treatment accorded him during his illness. He is now on his way to recovery and weighs 141 pounds.

To the friends of "Eddie" Connell, I wish to state that he is still out in front on the firing line for labor and old L. U. No. 86—a real veteran. He asked me to remember him to "Pop" Kendall, Herman Meeder, McCauley, Johnny Roth, Melchore and all those boys, and I am sure that if you're "Eddie's" friends you're our friends, also.

Address any personal letters to 113 North Fitzhugh Street, care Local Union No. 86, I. B. E. W., Rochester, N. Y.

CARLETON E. MEADE.

L. U. NO. 98, PHILADELPHIA, PA.

Editor:

Without making excuses for my first letter, or my inability to write, etc., I will try to get this one off quick, and make it short.

Since the last letter from Local No. 98 appeared in the JOURNAL there have been quite a number of happenings in this section, among which was our regular election, when practically all of the former officers were returned to office, which assures us that the progress we have made in the past year is to be continued.

The injunction case mentioned in one of our previous letters, in which the building trades were successful in proving the injunction inoperative, due to its too sweeping scope, has had its effect, I am given to understand, in that the steamfitters and plumbers have signed up the contractor to

whom this injunction had been granted, so that we are hopeful of this contractor (and he has proven himself very powerful) going along with the building trades.

We, unfortunately, still have with us the "southern menace" and some of the large contracting concerns continue to employ this class of cheap labor. There must be a large supply of this ignorant labor down there, for as fast as one is killed off because of ignorance of the proper way to handle the work there are three to take his place and, boy, how fast they are being killed off and shipped home in boxes.

Our annual outing was, we are glad to say, a wonderful success, with visiting Brothers from Baltimore, Trenton, Newark, Camden, Wilmington and Atlantic City. I hope they all had a good time, for there was every reason to do so.

By the time this letter reaches print, we will be enjoying new conditions, a new agreement going into effect September 1, carrying with it an increase in wages, and several other changes from our old agreement.

International Vice President Kloter has been with us now for some time, and we are hopeful that he will stay; he appears to know what he wants and, what is more, how to get it. I believe I am telling the truth when I say he has the confidence of the entire membership of the organization, and when that is the case he no doubt feels that his whole time can be occupied in working for their interests, rather than wasting a lot of valuable time fighting internal troubles.

Indications are that elevator and theatrical situation is in a fair way to be adjusted, and it is gratifying to know that the International Office is interested.

The new constitution is certainly a great improvement over what we have had; the clarity of it is such a departure that the sickness appears to be entirely cured, thanks to the attending physicians.

Now that that much is off my mind, I will try to compose a letter for the next issue.

J. J. WEIMAN.

L. U. NO. 102, PATERSON, N. J.

Editor:

There are many opportunities in this vicinity. In the heart of our own city, Paterson, we have a well equipped trade school. During the winter months night courses are offered to journeymen and helpers. The latest in equipment and technical information may be had. Not only that but the faculty are all practical union men.

The Paterson Vocational School, situated on the corner of Summer and Ellison Streets in Paterson, was instrumental in helping the union mechanics in more ways than one. Brother Nick Cantalina, head of the faculty, co-operates with the local. Many men have come to him for trade information which he has always gladly supplied.

I say to you Brothers, in order to keep the school in the union fold, in order to become better mechanics get wise and buckle down.

Some of the courses taught are:

I. Elementary electrical theory. Magnets, magnetism, voltair electricity, primary cells, resistance, Ohm's law, etc.

II. Wiring—Bells, annunciators, burglar alarms, fire alarms, inside telephone systems, lighting, D. C. motor wiring, and A. C. motor wiring.

III. Plan reading—Construction, mechanical and electrical.

IV. Armature winding—testing and repairs. Theory and practical.

V. D. C. generators and motors. Theory of D. C. generators, applications and uses of D. C. generators, testing and repair,

D. C. motors and starters, regulators and controllers.

VI. a. A. C. motors and generators. Single phase, two phase, three phase, theory, construction, applications, starters, compensators, trouble shooting, testing.

b. A. C. motors and generators—advanced.

VII. a. Transformers—Theory, applications, connections.

b. Transformers—Advanced.

VIII. Electrical measuring instruments.

IX. Advanced electrical theory. Vector analysis, slide rule, solution of A. C. problems.

X. Electrical code—Rules and regulations.

The above article will probably be criticized by many of the membership, but I'm trying to follow Brother Broach's principles, "Do what you think is right."

Another good slogan is "Don't criticize unless you have something better to offer."

If a man deserves praise give it to him. Nothing so encourages a man as knowing his efforts are being appreciated.

Brother Charles Ward, the chief city electrical inspector, surely deserves some of it. Brother Ward or "Charlie," as most of the boys know him, has kept up his card in the local and has been active on the constructive side. Not only is he conscientious in his official duties, but his union duties as well. Brother Ward has been appointed on the photographic committee. So, Brothers, beware, the object of this committee is not only to photograph good workmanship, but poor workmanship as well and woe to the man who installs an inefficient installation. The pitiless light of publicity will be turned on him. No one can fully appreciate the high standard set by Brother Ward on his inspections unless one compares the installations with other nearby towns.

THOMAS COHEN.

L. U. NO. 104, BOSTON, MASS.

Editor:

Last month's election made quite a change in the local. Brother Mike Birmingham, who was president in 1913 when I was initiated, came back into local politics and was elected president again by a good majority. E. M. McEachren, who has been business agent for the last 11 years, was replaced by Frank Smith. The vote was close—89 to 95. The business agent reports at the last two meetings were very favorable and I expect to have good news for anyone who likes Boston. Until then, "over the river."

H. N. FITZGERALD.

L. U. NO. 105, HAMILTON, ONT., CAN.

Editor:

Another month has rolled around and every thing about the same. Work has held up remarkably when you consider the depression which we are now in, but we have our worst months to come and it looks like a tough winter. In spite of all this we have a new agreement which is now in the hands of the contractors, thanks to Brother McNamara, who has kept it out of the waste basket. We expect an early settlement which puts us up one more step in the ladder of progress.

Speaking of progress, we all agree with the new constitution. This is a credit to the constitution committee; could be improved as I don't see any mention of compulsory training in trade union procedure which some of the boys need and the unrestrained use of a shotgun for the use of the president for law and order. However, I suppose that is a problem of our own and we can take care of it. Ask Brother George Morrison. We have had two very good meetings this month, lots of business done, and with

better turnouts now the cooler weather is here. Brother J. Noble has been with us the last couple of meetings with his kindly advice and timely guidance.

Mr. Editor, in your magazine chat, you ask, What would you like to read? Do you really want to know? What I think would go over big is how about a page or two for hobbies: Coins, stamps, care of flowers, fish, or collecting of eggs, china, cut glass, beer labels (in Canada only). This material to be supplied by the readers. And here's another: Questions and Answers Department. These questions to be answered by the readers on any subject in answer to your "Speak, will yuh?" I spoke and I say so long till next month.

THOMAS H. READ.

L. U. NO. 107, GRAND RAPIDS, MICH.

Editor:

As L. U. No. 107 has no press secretary, I was requested to write an article for the WORKER in regard to the many inquiries I have had about Consumer Power Company's cut over here. I understand they will use local men as much as possible at present, except armature winders, who are not very plentiful here. It is an open shop job.

Have had several letters and wires in the past few months asking if Grand Rapids store equipment, show cases, are wired by union electricians. They are not in Grand Rapids, as we have no members working in their shops here. During the past winter the local tried to get an ordinance through the city commission that journeymen electricians be licensed, but it was too progressive a measure for this town to grasp and was turned down, owing to the influence of some of our open shop contractors.

Have just received some copies of the new constitution. Note many changes in the different articles, especially in duties of local officers. The comments of President Broach in the WORKER are very instructive and timely, and are read by members of other crafts as well as electricians, by remarks one hears in the Labor Hall in regard to them. One thing is certain, when he goes on NBC, Labor Day, he will have listeners a-plenty in this cross roads.

CHAS. ANDERSON.

L. U. NO. 108, TAMPA, FLA.

Editor:

Electrical workers in L. U. No. 108 are still rollicking along, a day here and a day there. Although most of the members are working, few are getting more than half time. It was voted at our last meeting that we would not solicit any more members until conditions improved. About 90 per cent of the electricians in Tampa are members of the Brotherhood and it is hard to care for our members now as there is practically no building at present and not much planned for the balance of the year. Let me warn all Brothers who have in mind to migrate to Florida this winter that they must arrange to bring along a full bag of rations unless conditions improve. Don't think that I am Old Man Gloom himself, for I don't feel that we are situated any worse than many other locals but we are affected by the general depression the same as you and many of our boys lost their all through the recent bank failures and it will be a long time before they can catch up; however, they have all been faithful Brothers and we cannot afford to lose their moral support especially during this period of distress.

Local No. 108 is planning a series of social events throughout the coming season which we hope will enhance our finances

and help us to carry on. We will participate in the Labor Day picnic of the central body and have arranged for booths and concessions to be operated by the local. The women's auxiliary is to have a booth for the vending of refreshments. We will tell you more about our plans for the future in the next issue.

One of our boys, who is night electrician at the airport, advised us recently that he had finished his course in flying and made his first solo, taking off and landing on the same spot. And thereby lies a tale. The truth of the matter was that "Bobby" was asked to sit in the cockpit of a plane and make contact while the pilot spun the propeller. That was all right, but the pilot had forgotten to place chocks under the wheels. Bobby contacted perfectly and started across the Atlantic with the gun wide open. He didn't wait to say good-bye, but vaulted out of the plane, landing on even keel on his back. The plane continued until it found some soft sand where it somersaulted. The damage was slight and we are all thankful that Bobby is still with us, and that he is still able to keep the beacons burning to guide older aeronauts to a better landing than his.

During the week ending August 17, Tampa entertained the supreme lodge of the Knights of Pythias in their national convention. The electrical workers came forward and helped relieve a situation that might have been embarrassing to the host. I am enclosing a clipping from one of our papers which explains the situation:

(South Florida Herald, August 15, 1930. Permission to reprint granted by F. L. Judd, vice president and editor.)

"Union Workers Earn Praise from Public"

"The city departments and individuals and civic bodies tried without success to secure fans and equipment to make the quarters of the Knights of Pythias comfortable during their stay in Tampa, this week.

"After many attempts and much searching the matter was presented to the Electrical Workers Local Union No. 108. They, through some of the active members, secured the loan of 50 electric fans from Mr. Ryan, manager of the Floridan and the Tampa Terrace Hotels."

Am glad to note in the revision of the constitution, as published in our last JOURNAL, that pass words and signs are to be omitted. Never could remember that word anyway. Looks like the cabinet called by President Broach did some real work. As far as I have read I can find nothing that does not indicate that a thorough study of the problems we had were made and that fairness and equity for all were of paramount issue.

I look for great things in the future and I am confident that we will get them.

Good work, Brother Broach. Auf wieder sehen.

R. H. SMITH.

L. U. NO. 120, LONDON, ONT., CAN.

Editor:

We have had our great big spread as per usual last month in one swell park called Spring Bank, and by all accounts it was just as good as last time only better.

We sure have to hand it out to the women, as they did a wonderful job on serving and setting up of the tables. A big basket lunch was called for and part was called from the local, but the best part, of course, was donated by the women and they sure know how to go about and spread the swell pies and cakes and we just went out and had one glorious time.

We had some swell prizes donated by most of the local shops, some union and some not, but they kicked in for a prize when we asked for it.

I guess there were around 150 people, members and their friends, who sat down to one grand supper. But the best of the prizes that were awarded was when the linemen just went out and knocked h— out of an old ball game and made the inside "roughnecks" like it. We just beat them to a frazzle and then some.

There were around 15 events run off and they all enjoyed them, I think. We also had Brother Ernie Ingles, first vice president. You all know who he is; well, he was on the inside men's team, and he just told me tonight (August 28) that it was as good a licking as he has had in a long time and he is not a spring chicken either. He was up to meeting tonight for the first time in five or six months. Of course, if he lived in or around London he might get time to call around once in a while but I guess he is too busy.

Brother Ingles explained a whole lot about the new rules and regulations that the new book calls for and paved the way over, as a lot of the Brothers were and are stuck on some of them yet. But when they get them chewed up and down a bit I think they will be easy.

ROY SERVICE.

L. U. NO. 125, PORTLAND, OREG.

Editor:

It behooves me to apply myself diligently, for I learn, from a perusal of our newly revised constitution, that our local president has full power and authority to fire me and appoint my successor, if in his judgment such procedure is advisable. Gone are the days when a press secretary could loaf on the job in sweet immunity until next election, trusting to luck not to be nominated again. Now, since the president must, under pain of malfeasance in office, see to it that all officers and appointees function with celerity and dispatch, ye luckless scribe must measure up to his responsibilities or show cause why, and at no advance in pay. Nor as yet does there appear to be relief in the form of mechanization of this industry.

Speaking of the new constitution, Mr. Editor, I am frank to express the opinion that it is a good work well done. The executive board of Local Union No. 125, after meeting last night spent some time in a careful consideration of the outstanding features as outlined in the current issue of the JOURNAL. Most of the provisions received particular scrutiny and comment. The unanimous expression of all members present was that we have no fault to find. The way that dead matter has been weeded out, ambiguous passages made plain, and the whole document reduced to forceful practical workability calls for sincere commendation of the committee who accomplished it. You will understand the significance of this statement, Mr. Editor, when you recall that the action of Local No. 125 upon the referendum was unfavorable, and realize that, upon this account, our officers no doubt gave more than usually deep consideration to the changes effected.

Now that the new laws are in effect there is no doubt that the business of the Brotherhood will go forward with increased efficiency, and it will not be long before results will be manifest. Local No. 125 is considered a live and business-like union, but it is quite apparent that the new rules will speed up and add interest to our meetings, as well as increase the efficiency of our organization. I am sure that every local in the Brotherhood will find this true as soon as the im-

provements are applied which the constitution committee has made possible.

It is fortunate that this revision has taken place at a time when it is sorely needed. With conditions as they are all over the country the need of stability and good leadership are keenly felt. The readjustments and reorganizations necessary to get down to the business like routine of the new laws will serve to knit more closely the fabric of the local unions, and the centralized control established, as well as more clearly defined rules governing the locals themselves will make for more cordial relations between them. Greater unity of action and co-operation should inevitably result. These progresses will be, perhaps, largely completed within the next few months, and the result will be a strong, aggressive Brotherhood. Then, when industry takes the decided turn for the better, which it must do before many months, the I. B. E. W. will be in condition, and doubtless in a position, to take advantage of its opportunities. We will be a well organized business, ready and capable of doing business with the greater industry of this age.

Not the least of the good works of the committee was the creation of the two new I. V. P. districts. That will be a great advantage to us, in the west, and doubtless there will be no less appreciation in the south.

On the whole, a long step forward has been taken by the Brotherhood, and I am impelled to again express sincere appreciation of the work accomplished by the constitution committee, and to offer congratulations to Brother Broach upon the results achieved.

DALE B. SIGLER.

L. U. NO. 145, ROCK ISLAND, MO- LINE, ILL., AND DAVENPORT, IOWA

Editor:

This is the humble position that the boys all like; they mean to get out of, though. Friday evening, the 25th, was our installation of officers and the entertainment committee decided to spend the balance of their fund, so the boys would not have to scrap over it at meeting, and it was well taken. Brother C. D. Case was elected president; G. M. Quigley, vice president; Joe Reimers, financial secretary; E. L. Smith, recording secretary; Brother McCabe, overseer of funds, and J. T. Wood, business agent. So any Brother crossing the Mississippi at the Tri-Cities, he will be a good one to see if you expect to stop over. Office in Labor Temple, Rock Island.

Work has not been so plentiful this year, although the boys got a good work-out the first 15 days of July. One of our local firms received the lighting contract for two baseball fields, Rock Island and Moline, of the Mississippi Valley League, for night baseball. I might add that we co-operated with the linemen on this job. They set the poles, installed the arms, strung the primary, and set transformers; and the inside men installed the lights.

This was good experience for the boys; 55 to 70-foot sticks and they were beauties, too, and I might say these two fields are of the highest type of lighting of that type of equipment in the country. And was it hot? The temperature hung around 100 degrees most of the time. The boys' necks looked like turkey gobblers.

I believe that night baseball is the only salvation for the minor league teams, apparently. The attendance busted from an average of 150 to 1,000 in attendance. Is it not worth while? You can watch the game while Old Sol has passed on. The ball diamond has an average of six to 18-foot can-

dles in lighting, so you have no trouble seeing every play of the game. I will try to have a photograph of the team in action in this writing or the near future. [Editor's Note: Welcome.]

We had a welcome visitor this month in our city—Brother Hans Johnson, our recent business agent, who has been located in New York City Local No. 3 the past three years. Brother Johnson decided to take himself a vacation by visiting his old play grounds and doing a little fishing in northern Minnesota before getting back in the harness.

It looks possible that several locals have received a communication or pamphlet which was sent out by the Granite City, Ill., Chamber of Commerce, which you may easily see that the chamber of commerce has, in that community, no love for the fair paid, organized mechanic. I would like very much if anybody can inform me what the salary of this Mr. Porter is, or perhaps he thinks he should have an increase. We will admit that organized labor does not play the stock markets, but they are good home owners and taxpayers in the community in which they live, and that's what helps the city and makes it a better place to live in. That's what that type of chamber of commerce man is worth to your community. They don't want to see organized labor men be good property owners and prominent in community affairs.

The employment situation is very bad in the tri-cities but it seems that's the situation all over. A few of the firms are working the five-day week, through the slack period and hot weather.

Will be with you again at a later date.

G. O. WILSON.

L. U. NO. 163, WILKES-BARRE, PA.

Editor:

I told you at our last writing that we attended a meeting in Scranton. It was for business purposes and we were successful in so far that they appointed a committee to work in conjunction with one of ours and one of Hazelton local to find ways and means to control the electrical work in this locality. We attended a meeting in Hazelton since and met quite a bit of opposition to the plan because they did not understand it clearly at that time. This difference has been set aside since then and the boys see the matter in a different light because they understand the plan now. A committee of our local attended a clambake conducted by Hazelton local August 16. We had a real good time and want to take this means of thanking the boys.

By the way those boys know their stuff when it comes to doing things. There is no half way stuff about it. Their committee left nothing undone to assure the success of the affair. Most of the locals were there and those who were not (through their own fault or otherwise) certainly missed one good time, as everything, even the day, was perfect. The liquid refreshment was put to a severe test, but under the control of "Fiddler" Mowery, kept pace with the demands. Hughs, the carpenters' business agent, of Hazelton, was there. He is a regular boy and gave us some good talks and advice. Snetts, the underwriters' inspector in that district, was also there and talked about keeping a high standard in the electrical industry. Although not a member of organized labor, he is in sympathy with our views.

It seems good to see the boys working hand in hand with the powers that be. As I said before, they can't be beat for good fellowship and all round common sense. So you birds of L. U. No. 163 who are always

carrying a chip on your shoulders had better wise up and snap out of it.

The new constitution went into effect August 15. We have books ordered for the membership but are not going to deliver or mail them to your house. You have been used to having things handed to you off of a platter before, but that is all past now. As I said before, snap out of it, as ignorance of the law is no excuse. Those of you who don't like this stuff, come to the meeting and holler about it, not on the streets and in the shops where the bosses and the clerks know all of our business before we know it ourselves.

Some of you haven't been around in so long that I'll give you the time and place. Time, second and fourth Tuesdays, 8 p. m.; place, 41 E. Market Street.

GEORGE GERHARDT.

L. U. NO. 193, SPRINGFIELD, ILL.

Editor:

I think the best constitution we have had is now before us and we should make the best effort to live up to it. To cut out the password is a good thing; it will not only save time but it will make the Brothers keep their receipts up. I can see many good ideas in the rules; at any rate they must be carried out so it does not make any difference about you kicking. Just better fall in and go along and you will soon notice what a difference it will make all around. The Brotherhood spirit will be more apparent. At least there is a chance for some of the roughness to become more gentle and more concordant. Of course, it depends a great deal upon your president and how he can understand. Things may go slow but they will be for the better. I say on the whole the committee's work was good and well worth the cost. Time will tell and we shall see what we shall see and I feel sure that it will be much better than expected and that should mean a lot to our Brotherhood and its members, even if it does only make more manly meetings it will soon repay.

We here are having about the same gait as usual—a lot of work for those on the job but the job does not call for more men. Most all of our members are working but no new men are added. We have only one job here that is under an agreement, that is the city light. We also have the fair, but that is only about a month's job. There are other jobs, as the Illinois Power, the traction company, and Mother Bell, no good for members, and it seems as if the men working these jobs are very well pleased with their conditions. They do not care for a union card, nor any change in the working hours; nor do they want any better pay for what they do. Of course, some day they may own the company as they are buying stock. Even if they should not live long enough to own the company, the company gives them a policy providing they stay long enough at a rate somewhere near \$2.70 per day less than the union men work for. I guess after all it is like the old lady said, every one to his notion.

F. C. HUSE.

L. U. NO. 212, CINCINNATI, OHIO

Editor:

Just 30 days from the time that L. U. No. 212 was granted the five day week, the membership took advantage of the fifth Saturday by celebrating with one of those good old-fashioned basket picnics.

The committee put forth considerable effort to insure a very pleasant and enjoyable time to all those who attended.

There was music and dancing, contests and games and plenty of goodfellowship was also

displayed, which was very gratifying to the committee, for this was one of the very purposes for which the picnic was given.

In my opinion the ball game was the main attraction of the day, and in this Brother Marty featured with his heavy slugging.

Both teams were well supported by faithful rooters who were willing to wager anything from a bottle of pop to a beverage of another kind that their favored team would be victorious.

The gang on the "Carew Tower Job" crossed bats with the gang on the "New Telephone Job" and the boys from both teams were out after gore.

Prior to the game, Brother Manny Koch, who is known as "The Muggsy McGraw" of the Carew Tower Team, made a lot of strong assertions about what his team was going to do to that gang of offsets on the telephone job.

Whether Brother Baade is manager of the boys on the telephone job or not I can't say, but he sure did quite a bit of boosting for them.

One of the boys from the "Carew Tower Job" told me that he had a hunch that their team was going to win that ball game, and I immediately asked him why.

Well, he said, our team is working on the



ORGANIZED LABOR WAS EMPLOYED ON THIS BUILDING AND MEMBERS OF THE I. B. E. W., L. U. NO. 145, DID THE WIRING. AMERICAN COMMERCIAL AND SAVINGS BANK, DAVENPORT, IOWA.



MINNEAPOLIS LOCAL KNOWS HOW TO GIVE OUTDOOR

highest job in town and therefore we should run up the highest score.

Which they did, the score being Carew Tower 12, Telephone Job 9. There was some fine all around playing by men on both sides and I must mention the fact that Brother Red Schmeddink on the telephone team cleaned the bases with a homer in the seventh inning, thus boosting their stock of runs by four.

There is one other contest that I must refer to that gave the crowd quite a thrill, this was the egg throwing contest, the object of the game being for partners to toss an egg from one to the other; dropping the egg meant the elimination of that team, and right here I want to say that there were a lot of eggs in that game besides the ones that were being tossed.

WILLIAM F. MITTENDORF.

L. U. NO. 230, VICTORIA, B. C.

Editor:

On August 9, at Deep Cove, one of the many beautiful seaside resorts with which this island abounds, was held an all-day picnic by the joint bodies of the Electrical Contractors' Association and L. U. No. 230.

The day was ideal and under the efficient management of the sports committee the races and games, 29 in all, were run through without a hitch. The freak events as usual aroused a lot of merriment.

Our business agent, Brother Reid, has long cherished the hope of becoming a champion of the wheel barrow race, which is a race in which the hands are used in place of the head. This year he seemed destined to realize his wish, but alas! just as he developed a phenomenal burst of speed on the home stretch his fair partner collapsed and his hope blasted again, at least that was what his voice seemed to say from out of the cloud of dust that enveloped him.

In the ball games and the tug of war the inside workers had the Indian sign on the linemen. In the base ball the score was standing at 12 to 0 in favor of the inside men when Brother Casey, with a vengeful look and fire in his eye and swinging a mighty bludgeon, stepped up to the plate. He was an heroic figure, his manly bearing like that of Ajax defying the lightning. He dared the pitcher to do his worst, which the

pitcher promptly did. Brother Casey met that ball with a mighty smack which sent it sailing far into the distance and while the crowd was yet dumb with amazement he sped around the bases like Ajax with the lightning after him and scored a home run and so saved the linemen from complete disgrace.

The tug of war was finally won by the inside men. The first pull was won by the linemen easily, and then, because their avoirdupois far exceeded that of their opponents, in an ill-fated moment, in order to even up, they allowed Brother Mat Ball to join the other side.

Now Brother Mat had brought his wife and handsome son of 10 months, and this son and heir so captivated the ladies that they vied with each other for his possession; this so elated Mat, that when he joined the inside bunch, he put so much pep into the side that they won the next two pulls and the match quite easily.

Brother Teddie Morrison, business agent of Local No. 213, was present and met a number of his old friends and acquaintances. We were glad to see that Brother Robert Baxter, who has been on the sick list so long, was able to be present.

We are sorry to report that the B. C. Electric Company, by whom many of us are employed, having completed a program of reconstruction, is laying off a number of the Brothers. We are sorry to lose them as they are a clean, jolly bunch of efficient workers and they are card men in the full sense of the word. The Phone has also laid off a number, so the outlook for work is rather poor at the present.

SHAPPIE.

L. U. NO. 275, MUSKEGON, MICH.

Editor:

The members of this local and their families enjoyed their annual picnic at Twin Lakes, August 2.

Brother Ray Starr and his committee, consisting of Brothers Otis Giles, Clarence Wagner and Harry Startup, certainly deserve much praise for their work. If any one failed to have a good time it was their own fault.

The ball game between the regulars and the scrubs was a hot one. The scrubs won

out by a score of about 10 to 5. (If the score is wrong it is because the players failed to report to the scorer when making a score.) By the way the above score helps to explain why our team has been in the cellar all summer. We must have had our teams interchanged. Well, anyway if we could have had Brother Plunkett as umpire during the past season it is a safe bet that our percentage would have been much higher.

You should have seen our recording secretary, Brother Gerst, in his cut-away suit. That is a little cut away here and a little there.

Brother Sikkenga won the smoking contest while Brother Sweet puffed in second.

The women showed us how accurately they could throw the rolling pin and my advice to the fellows is to remove all such weapons from the house. Mrs. Steve Slatery socked the dummy in the head and took first prize. Watch your step, Steve.

Mrs. Bruce Jacob won the spike driving contest by sending a large spike home in 10 strokes.

Mrs. Harry Startup kept the children busy with a series of well-planned contests.

I have given you just a sample of the happenings of the day. Just enough to show you that we have a real time at the annual picnic.

Last month I predicted big business for "Street and Walker." To date their crew is large and they are still hiring.

I. M. GIBBS.

L. U. NO. 292, MINNEAPOLIS, MINN.

Editor:

Electrical Workers Union No. 292 has one more victory to its credit by running off a very successful picnic at Bass Lake last Saturday afternoon.

The crowd was a little slow in getting to the grounds, but after the games started, everything went off in shipshape style.

There was only one accident; well, you might not call it an accident, but the rest of you Brothers just ask Harry Christianson how he likes to take a coffee bath.

One more thing noticeable, while running off some of the games, was a fairly large group of men, with their heads together up under the trees talking over conditions.



AFFAIRS WHICH ATTRACT THE WHOLE FAMILY

Everybody is hoping that they at least settled the unemployment problem.

One of the features of the picnic was the fact that Brother Carl Velin walked off with all the bets that were posted by himself and Dusk. Carl Velin was betting on the north and Dusk on the south.

Another feature that drew many laughs from the crowd was the egg passing contest; some of the Brothers in the contest wearing yolks and white of eggs in different places from their head to their feet. The winners are as follows:

Sack race for boys under 15 years—Kenneth Velin; shoe scramble race for girls under 15 years—Janice Velin; swimming race for girls 15 years—Katherine Lang; swimming race for boys 15 years—Carl Skeldon; egg passing contest—Elmer Velin and Paul Bartholoma; running race for married women—Anna Puskar; running race for unmarried women—Loretta Rice; women's ball throwing contest—Mrs. Claude Skeldon. The north side men's diamond ball team defeated the south side by a score of 4 to 1. The lineup of the teams was: North Side—P. Bartholoma, pitcher; F. Schultz, catcher; C. Mullen, second base; Morris Rice, left short; John Edmond, center field; Richard Whitney, left field; Elmer Velin, first base; F. Lang, third base; George Nelson, right short. Substitutes, E. F. Ackerman, Roy Hook and Milt Christenson. South Side—A. Wilson, catcher; C. Skeldon, pitcher; Frank McCoy, second base; C. Hanson, left short; Neprude, center field; L. Larson, left field; Roy Hodge, first base; Bert Skeldon, third base; Art Hogan, right short. Substitutes—Wm. Nessler and Wm. Schumacher.

Brother Ted Filiatreau was the official umpire for the men's game and came through without even one black eye.

The north side women's team defeated the south side women's team by a score of 13 to 9. Lineup of the teams follows: North Side—Dorothy Schultz, third base; Loretta Rice, pitcher; Mrs. Rice, left short; Mrs. F. Schultz, left field; Mrs. M. Christenson, first base; Mrs. R. Vosika, catcher; Mrs. Roy Hook, right short; Mrs. C. Mullen, right field; Mrs. H. Taylor, center field; Miss Kuntz, second base. Substitutes, Mrs. E. Velin, Mrs. F. Lang, Mrs. P. Bartholoma, Mrs. J. Edmond and Mrs. George Nelson. South Side—Evelyn Bergy, third base; Elsie

Prall, pitcher; Elaine Urtubees, left short; Edith Skeldon, left field; Mrs. A. Hogan, first base; Mrs. L. Larson, catcher; Mrs. Nels Simonson, right short; Mrs. Neprude, right field; Miss Marty, center field; Mary Jane, second base.

Brother Stanley Anderson, business representative of the painters' union, did a splendid job of umpiring the game.

Everybody keep their eyes and ears open for our next picnic!

The above is a verbatim report of Brother Milt's writeup as published in the Labor Review. There is little to add.

Free coffee and free ice cream were served by the committee at about 6 p. m. when everybody ate their lunch and all seemed to have well filled baskets with plenty of good things to eat. During the afternoon, most of the attendance was gathered into a group and a photograph was taken, a copy of which I am forwarding for publication with this letter.

Conditions of the employment situation are much the same as they were last month; if anything there is a decline in the number of those employed in the electrical industry. Some of the other trades show a slight improvement along this line though there is nothing to brag about anywhere. As this letter is sufficiently long for this time, I will pull the switch.

W. WAPLES.

L. U. NO. 306, AKRON, OHIO

Editor:

Throughout this good old U. S. A. you may read such articles as this:

"Akron Will Stabilize"

"Akron has good reason to be pleased with the initiative taken by its great industries toward providing steadier employment for their workers. The plan just announced by the Goodyear company, that so far as business conditions permit it will maintain the rotation system of factory employment, returning to the payroll hundreds of men who were dismissed in groups, seems to have the approval of all other Akron industrial concerns. In their own way nearly all of these were adopting measures for their own administration similar to the Goodyear plan, and it was practiced besides in the larger mercantile houses.

"The plan is simply this: When trade conditions require a letting down of production, instead of dismissing workers wholesale to reduce the force, there will be a rotation of their weeks of unemployment. The entire working force will thus bear the thrust of occasional unemployment, instead of having it sustained wholly by a few. In the case of the present Goodyear personnel this means that an employee will be idle only one week in eight, or to a degree corresponding to the business which the company may have in hand. By this means the sharp contrasts between employment and idleness will be reduced, and both the company and the men will know 'where they are at.' In spirit the purpose is to reduce so far as possible the weeks of enforced idleness throughout the year. Production, instead of being rushed forward in a few months of feverish operations, will be as nearly equalized as possible, with the result that workers can count upon a fairly steady job and their employers will be saved the cost and inconvenience of occasionally enlarging the force by hastily recruiting workers from other cities."

A week ago we thought good times were back again. Our new business agent went out and got an application. Now, folks, allow me to introduce Mr. Johnson, who has been with us acting as business representative for about one month, and has also been appointed business representative for the Akron building trades. Listen while I tell you a little story about Brother Johnson. To most of you no doubt it won't be a surprise, but, Brothers, this is the first time in 15 years that this city has had anything like this happen. Three days after Brother Johnson received his commission as building trades representative he went out here to a church where he introduced himself as such, telling Mr. Contractor he had come to help and save him money, etc. And they parted good friends. Another day passed; a second visit; finding non-union lathers at work. So Brother Johnson and Mr. Contractor came together. One said he'd pull the job; the other said "You can't; you haven't been doing it; you can't start now. I'll use the law on you." "Now, I'm very sorry if you happen to be the first one to have a job pulled, but, Brother, this will be my first attempt at pulling a job. And I'm

going to give you till tomorrow morning to think it over." "Now look here, these boys are going to lath this job and that's all there is to it."

Tomorrow comes. Brother Johnson gets out early; meets a colored lad at the mortar box, just filling her up. "Say, boy, I would not be in a hurry about mixing that stuff if I were you. Think we're going to have a little labor trouble here." "All right, boss." Up the ladder we go. "Hello, brickie; when you get that mud used up, knock off." "Knock off right now if you say the word." "No, we treat 'em square—use up your mud." While down below, "Who told you not to mix that mud? I'm paying you—get to work or get out." "Well, the man say think they're goin' to be a little labor trouble, boss."

Up the ladder comes the big contractor. "What you mean, stopping these men working? I'm paying them; they're working for me." "Just wanted to save you a little money is all; didn't want that mud to get hard on you; see? But since you have started to mix more—Brickie, might just as well knock off now. And, say, fellows, way up on the roof is a gang at work that don't have an organization here—roofers." And down they came. Across the way is a chap digging a ditch; up he comes.

Leaving the job they hear the big contractor shout, "I'll use the law on you."

Later on he calls Brother Johnson by phone, telling him that he would like to see him in the morning, as quick as possible.

We do hope that by morning he will feel a little different and talk business. Then yours truly can tell you just a little more next month.

I hear some of you ask, where is Brother Jeff? Well, he bought a new Ford, got married and resigned his job. Of course, we have Brother Jeff with us yet and we all wish him the very best of luck.

And Brother Fibish is still the same old "Bob." Poor soul, he got a blister on his foot this spring trying to sell a new wall-paper cleaner.

Frank Mantel, says, "No more winters like that last one—go west, big boy, go west." Frank tried to sell seat covers for automobiles.

MELL.

L. U. NO. 308, ST. PETERSBURG, FLA.

Editor:

I have been utilizing all my spare time in perusing and absorbing that wonderful instrument, our new International Constitution. No doubt some will not like it as it stands, but for me, I think it a big step toward progress, and progress we must if we wish to get somewhere.

Hail to our new vice president of this the fifth district, Brother A. Wilson, of Miami, Fla. Welcome to our city. Anything we can do over here to assist just whistle.

Another oil well has been started at Clearwater, which makes three now in the making, and here is hoping they get it soon. It looks to me as if the "Springtime City" which I just mentioned, is going to beat us getting a deep water harbor. The government has men in there now making a survey, and should their report be in the affirmative then we with our "Mullet Key" proposition are going to be left at the post.

The apartment house owners and hotels are cleaning house, getting ready for the tourist season. It is making a little work for the Brothers but not enough to go around. I myself must be content to pester the time away on my ranch, which, when I get tired of I am going to donate to the International Office for to build a home that

will house our old pensioners. Don't laugh, I mean every word of it.

The advance guard of the tourists have already arrived, and this is how I know: In the last three days I have been approached by someone asking where the Salvation Army is located.

If there are any of the Brothers figuring on getting out of the cold climate and coming south, for your own sake bring your coal money along, as the majority of the banks are closed, and we are now doing business in the primitive way, that is, trading.

The big day is at hand again, and oh! how I do love to celebrate on "Labor's Birthday."

We will not be able to stage anything here as there is but a corporal's guard left, so the best bet is to join hands with Tampa, and have our gabfest at Egypt Lake.

It would be fine if we could all get over to Miami, but as I said before the bankers might go, but we have not the wherewithal. Excuse us, please.

You were hinting at a straw vote on what kind of interesting reading the Brothers want. Well, for me let it be psychological and character stories; also an essay on health, or why do we eat?

The women's auxiliary is going right along and no doubt you will hear from them. There will be a lot of work for them in the near future, as election of state and county officers will take place, and we want the right ones in. What I would like to do right now is a little priming on some of those who have not been hit by cyclical depression or stock market, and try to get the industrial pump working again.

By the way, speaking of industry, we have a new one now. Soon the citrus fruit will be ripe, but I doubt if you will see your fruit coming in the old square boxes or crates. The Florida Citrus Exchange has adopted a new container which will be cylindrical in shape, and can be turned out on a machine 20 per minute, or 9,600 per working day, with two operators. The machine is protected by 27 patents.

THE WOODCHOPPER.

L. U. NO. 309, EAST ST. LOUIS, ILL.

Editor:

News is like work—it is scarce. For the information of traveling Brothers, there will be no solicitation of shops for jobs, business representative placing all men in the future in accordance with our new working agreement.

The picnic was a success. Everyone apparently had a good time. Brothers Touchette and Ramage handled the affairs of the picnic very satisfactorily. Roy McCoy and Harve Devore were dispensers of that well-known beverage in the tall timbers of Falling Springs. Lotto was enjoyed by the women while the men traveled that well-beaten path to the tall timbers.

About the ball game: The grounds had to be turned over to the McBride players at 3:00 p. m. and the linemen versus the wiremen game was not finished, scoring at sixth inning 7 to 8 in favor of linemen. I wish to take this opportunity to express a word of thanks to the boys on the picnic committee.

Speaking of hazardous occupations, there is the window washer and the steeplejack and the electrician, and then there's the press secretary who dropped 11 stories into the waste basket getting this.

E. J. VINER.

Wit consists in knowing the resemblance of things which differ, and the difference of things which are alike.—Madame De Stael.

L. U. NO. 339, FT. WILLIAM, ONT., CAN.

Editor:

Most of us are very interested in the various changes in the constitution, as given in the JOURNAL last month. We have only one criticism to offer, namely, Article XXI, Section 1, monthly dues shall not be less than \$3 for journeymen, etc.

Our dues are \$2.50 per month per member. Goodness knows, we have quite a time collecting this amount. I do not know how our financial secretary will get the extra 50 cents. Now please don't think that we are making a song about nothing, but we cannot see why the minimum charge has been raised when conditions do not warrant it.

It may not make a lot of difference in a large local but will affect the smaller ones, struggling along against adverse currents. The per capita tax has not been raised, so it will not bring any more funds to the Brotherhood, therefore, why increase the difficulties of collecting dues which are always present in small lodges? Please bear in mind we are not ones "who love yesterday, have fear for today or expect calamity tomorrow," as our worthy International President has stated, but only give our views on a very important item which affects most locals.

Local No. 339 held a meeting on August 15; just purely routine business. A grant was made to the Labor Day committee towards general expenses. A varied program of sports has been arranged, consisting of the usual track events, auto races, and a five-mile race, which is one of the big features.

We have one sad event to record. George Traer, a lineman employed by the Port Arthur Public Utilities Commission, was instantly killed on August 12. He was at the top of a pole making repairs when he came in contact with a live wire and fell 40 feet onto rocks below, sustaining a fractured skull and broken ankle. Fellow employees rushed to his assistance but were unable to do anything. Hockey players and fans will recall George Traer as one of the game's most brilliant performers. He played with Ft. William, Ft. Arthur, Brandon and Eveleth. We are very sorry to state that George was not a member of the I. B. E. W., but popular all the same, and will be missed.

During the past week we had a visit from Brother F. Macintosh, of Winnipeg, newly appointed organizer for the district extending from Port Arthur to the Pacific Coast. The reason of his visit here was mainly to do with organizing the Canadian National Railway electricians who at present are not members of the I. B. E. W. We regret that we were not informed of his visit until he was about to return to Winnipeg and the officers of this local feel sure that they could have helped materially in discussing local conditions with the C. N. R. workers and also that we should have been informed of his appointment.

E. F. PRICE.

L. U. NO. 349, MIAMI, FLA.

Editor:

As was predicted in last month's JOURNAL, there is still no work in Miami, and no prospects of any at present. So the boys are spending their time signing up shops, and organizing the radio men, and with good results, considering local conditions. By the end of 1930 we hope to report a 100 per cent town again. The officers are working hard to improve conditions; in fact it is reported that Business Manager Roche has lost 25 pounds from hard work, maybe so? But you can not see where he lost it.

Organized labor, as usual is planning a big

Labor Day celebration, and while it will not be on such an elaborate scale as in the past, we intend to show the general public that the same old spirit still lives.

It was very gratifying to Local Union No. 349 to have Brother A. Wilson appointed an International Vice President. He is an old head in the movement, has served in nearly every office in the local, and has always given freely of his time and ability to us or other locals when in difficulty. He is energetic, yet level headed, and fair in all his dealings, and we know he will prove an asset to the Brotherhood, and to the fifth district in particular.

Our new constitution seems to meet with the approval of the membership. It should be easier to run a local under it, when it is enforced, and can not see how it will work a hardship on any one.

Again let me remind the traveling Brothers that only 10 per cent of our membership is working (all other reports are propaganda), so please govern yourself accordingly.

R. H. COLVIN.

L. U. NO. 353, TORONTO, ONT., CAN.

Editor:

Mr. Editor, between the two of us, we committed a deplorable "faux pas" when referring to that splendid Bank of Commerce job portrayed in the August number. A "faux pas" by the way is something I know nothing about, so I looked it up in Doctor Chase's almanac and find it's a sort of combination "Merkle and Heinie Zim."

In telling about the job we forgot to mention that Harry Wilson and Tommy Vernon are the men behind the electrical installation of Toronto's finest structure and the whole job is a tribute to the engineering genius of the Anglin Norcross Company, of Toronto and Montreal.

I know the editor will be fair enough to help me give credit where it is due. Anglin Norcross Company are without a doubt the best friends the international labor movement has in eastern Canada. Mr. Mitchell, who superintends the erection of the Bank of Commerce, has previously been with us on the Royal York and other major constructions and his jobs are always 100 per cent union. Mr. Mitchell's son, by the way, holds a card in Local No. 353, I. B. E. W.

The building depicted in this month's photographs represents another Anglin Norcross masterpiece. This is the head office of the Canada Life Assurance Company, one of the Dominion's finest insurance organizations. You can rest assured that the job is all union with the international unions in complete control of the structural end of the job.

Mr. Gill and Colonel Lidstone are in charge of the erection of the building while Ab Occomore and Bunny Bowen are the electrical kings on the job representing once again the Canadian Comstock Company, who have the wiring contract.

I must mention in passing that this pair of labor ambassadors stand supreme in job steward efficiency in Toronto. When Bunny Bowen gives the word the boys either pay up their dues or pick up their tools.

Jack Price, Ray McGovern and Johnnie Dolson are making rapid headway along these lines and are without doubt a real help to the business agents in keeping the city clean.

We had a fine picnic last Saturday, the first one in years, and our entertainment committee certainly did itself proud when they put this over with less than two weeks' notice. I wish they would have taken a photo of the committee so I could forward it on to you.

Joe Godden's Bank of Commerce team won the baseball cup and league championship, eliminating Jack Price's Bell Telephone squad 24 to 12. Joe made a circus catch that will be the topic of every hot stove league meeting for the next six months.

The picnic had the usual number of races and the business agent has been kept busy these last few days explaining the reason for so many boys being late in the morning. You see the wives of many of the members who feel as young as they look entered in the various races for women. Their spirit was wonderful, but since the picnic their hobbies have been forced to roll out and get their own breakfast each morning, as the better half is simply all tuckered out. There is an undercurrent of mutiny in the local against the men responsible for the women's races.

We had a peach of a meeting last Thursday night. Brother Shaw, of constitution

committee fame, explained salient features of the new constitution. These changes were well received and the members are right behind the executive in their enforcement.

Your correspondent suggested that the boys raise their dues one dollar per month to help clean up the town and while many of the members present were prepared to adopt the suggestion at once, cooler heads intervened and the matter will be decided at a specially called meeting on August 27, when this matter and the question of helpers will be threshed out to perfection.

International Vice President Ernie Ingles was in town for this session and once again he gave the boys a fine talk on economic conditions. Mr. Ingles is sure of a welcome every time he hits Toronto.

We are planning on the biggest parade ever for Labor Day of this year. We now own the best appearance cup outright and are going after further laurels. For the benefit of our friends across the line, I want to point out that Labor Day is the biggest day at the Canadian National Exhibition, which in turn is the greatest annual event of its kind in the world. Over 500,000 people line the route of the parade along the city streets and at Exhibition Park, and we know of no better way to emphasize the power of labor than this. I might say that we don't use the horse and buggy around here much nor do we attempt to tell locals in Vancouver or Miami how to run their business.

FRANK J. SELKE.

L. U. NO. 392, TROY, N. Y.

Editor:

Last month I was a delinquent in holding out on the WORKER. Last month the WORKER had two letters from New York state, from Brother C. Roberts, L. U. No. 696, and Mysterious Windy, from L. U. No. 544, Hornell, N. Y. We want to see the Empire State represented. Owe Brother C. Roberts an apology, as I was guilty of negligence last issue. He is an advocate of state license, also, and I know when other Brother secretaries pick it up we will have further discussions. The time is now and we must all get busy. When we have our license and look back on those wasted days we will regret that we had not taken the bull by the horns before. We cannot bring back the days that are gone forever. Will try to have a copy of a state licensing law for electrical workers for our next issue. One from a state that has had the law for years.

The locals from that state realize the great benefits derived from that law. Glad to see some local that is in favor of such licensing and will keep plugging for such a law and its enactment.

We are not in a very prosperous state here at present, but if we were licensed we could corral the work that is slipping away from us and that would help keep a few of the idle hands busy, instead of the handy men. So let's all work together for a state license.

To conform to the constitution, Brother Harry Mohl was elected to the office of financial secretary, succeeding I. S. Scott, who held the office of financial secretary and business agent. Brother Scott was chosen as business manager and assistant financial secretary.

The boys are all pretty well versed in the new changes in the constitution as they appeared in the WORKER, as they talked them on the floor at the meeting. Sufficient copies have been ordered so that all members will have a copy. The boys felt that they wanted a clam bake and on Sunday, September 7, they will all be treated to the



CANADIAN LIFE JOB, PERFORMED BY CANADA'S IMPORTANT CONSTRUCTION FIRM, ANGLIN-NORCROSS. ALL TRADES 100 PER CENT INTERNATIONAL UNION. CANADIAN COMSTOCK, ELECTRICAL CONTRACTOR; AB. OCCOMORE, FOREMAN; "BUNNY" BOWEN, JOB STEWARD.

same by our president, Charles Van Herpe, who is putting up the bake and is a past master in the art. We expect all members will be there and it would not surprise us much to see Brother Dave Bailey appear on the scene in his glider. He has had three trips in his glider. He has jumped from his glider and has made a perfect landing. Wonder if we have the pioneer man of the air. We had the honor of being the pioneer local of the I. B. E. W. as being the first local to have the five-day week, although we were omitted from the list in our official JOURNAL. Although the same thing happened once before. We are now on the third year of the five-day week.

JOHN J. SHEEHAN.

L. U. NO. 465, SAN DIEGO, CALIF.

Editor:

We now see an opening, in this cloud bank, for the outside locals on the Pacific Coast. In that opening stands Charles M. Feider, appointed by our worthy President H. H. Broach as our Pacific Coast business manager. Brothers, let us bestir ourselves and co-operate with such a force, that when Brother Feider starts blowing through that opening, he will carry with him such volume as to clear away the haze. Thus, we will be able to collect a just reward for our hazardous occupation with more safety to ourselves and the constantly growing users of light and power.

There was a time when one local union could deal with a local telephone or power company successfully in their local district because the holdings, etc., were in that locality, but now what do we find? Outside of some municipally owned plants, you have to deal with a subsidiary of a national holding company.

For a local union to ask a local branch of a light or telephone company for any conditions has a different angle nowadays. These companies are nearly all in one big merger of national scope. Their orders must come from New York, Chicago or wherever the King Pin is.

Now, Brothers, let us merge all our local unions as it were, into one big national holding union.

Get solidly behind our King Pin, President H. H. Broach, and his representatives, let them fight it out with the utility King Pins. I believe more progress can be made that way and much faster.

Glad to state that Local No. 465 has all its members working. Conditions are fair, but we are far from satisfied.

J. F. YOCUM.

L. U. NO. 497, WENATCHEE, WASH.

Editor:

It is an accepted fact that the present existing conditions are the worst that we have had since the war. Construction has slackened up, and with the larger corporations inaugurating lower wages, along with the ever-increasing number of migrations to this country, we are apt to wonder to what extent it will reach and how it will terminate.

There is cause to worry, Labor has fought for years to build up the conditions that we are enjoying today relative to a higher standard of living; it has been one grand and glorious struggle since the beginning. We have created by our persistent endeavoring a new world for the laborer. It has taken years of time to accomplish what we have. Are we going to let it revert back to those sordid conditions that the Brotherhood had to contend with when it was first born?

We have fought and we must continue to fight as we have never fought before, not

only to accomplish better conditions than those that we have, but to retain that which we have.

I have no news in the line of better conditions than that which I sent in last month. Work is very slack, and it will continue this way for a while regardless. There is some building going on, but labor—well, there are just run two many fer ach yob.

I am writing this letter a little early because I am headed for the Coast to take in the sights for a couple of weeks, and will can the general line of chatter until I feel a little more optimistic. However, I would like to compliment Brother Broach on his monthly contributions to the JOURNAL, they are great, just keep up the good work for we are with you to a man.

H. J. WELCH.

L. U. NO. 502, ST. JOHN, N. B., CAN.

Editor:

Well, Brothers, dipping in memories, let me relate just what has been accomplished in the city of St. John these past few months that we call summer. Our one big job, the St. John Public Hospital, a cool \$1,500,000, was started and remarkable progress to date has been made. The electrical installation is being carried on by the Canadian Comstock of Montreal, with O. G. Duncan as superintendent. Your correspondent had the pleasure of chatting with Mr. Duncan and found him a 100 per cent union man and he assured me that any help on the job would be only men that could show their cards paid in full.

At our last union meeting a very important subject was under a lengthy debate—the sending out of helpers by local contractors in preference to journeymen electricians. In New Brunswick there is no uniform electrical law, but in the city of St. John we have a by-law governing the licensing of electricians, but, with this in our favor we are faced with the usual slackness on the part of officials and results in the above situation. However, we are going after the papers, in this way trying to educate the public to request of the electricians doing their work—their union card—the symbol of efficiency. If any of the many locals have been faced or are being faced with this same problem I would deem it a real brotherly act if they would correspond with me and give me some knowledge of just what they are doing to remedy the trouble. But since my last writing I can report one improvement. Since the inception of our new secretary, W. Parrett, the old dollars have been pouring in the treasury. Surely a very acceptable feature. Keep up the good work, Wally.

A. O. Duncan, superintendent of the new General Public Hospital job here in St. John, extends his kind regards to Brothers Cecil Shaw, of Toronto, and Jack McBride, Winnipeg.

ROBERT F. JONES.

L. U. NO. 514, DETROIT, MICH.

Editor:

Few members attend meetings regularly, so why not start a move to have one or two meetings a month and have a good attendance—if not, why not?

Several of the Brothers have taken travelers and are out to find new grounds to do their stuff, and so that leaves those who are left to struggle onward with two or three days a week or what have you, if any.

It won't be long now and we shall get \$1.50 per, and we hope that the wiremen do not get too mad and stop hanging fixtures. But then, we mean to make ourselves clear, and just this: How about trade jurisdiction

or distinction as to how we stand? We are all in a muddle as to where, when and how we stand. Let's get together on this, and the sooner the better.

We shall sign off until next month and talk about the same thing, if not more, and see just how far we have gone—and besides a lot of very, very expensive political humor we are still trying and waiting for the day of prosperity to come again, if ever. So we will see you in the next meeting.

LOUIS FUNKE.

L. U. NO. 567, PORTLAND, MAINE

Editor:

We have always heard that "the old order changeth" but the multitudinous changes in our more modern constitution have the old order down under a long count, and I even found it necessary to peruse the articles closely to see if I am business agent or still press secretary. If I am business agent, I'll resign immediately; as press secretary, I should resign immediately.

I haven't noticed any new regulations governing the duties of a press secretary, except as to his appointment, and I'm not going to campaign for mine, and if President Ribbentrop doesn't see fit to appoint me I wish to assure him the feeling is mutual, but as I am a free lance on this occasion at least, I'll make the most of the opportunity, which won't be much.

The new constitution was exploded in our midst last night, through the medium of the JOURNAL and studied interpretations by our officers and executive board. No casualties were reported but several reverberations followed through the session and, while discussion on the floor was limited, many personal opinions were threshed out later. The changes were there, take 'em and like 'em, and I feel safe in saying most of them did anyway.

President Broach's articles appearing as a feature in the JOURNAL are all of that and there is no question but that his methods and inspiration are a boost to the JOURNAL's already increasing value to anyone, and I wonder if, after reading his fluent and pointed "comment," any member should search out my pittance, hidden away in the correspondence, except some curious Brother who wants to see if I'm still on the job. But then, his ability to lead the van is the reason he is president and we will all have to concede him a great deal and I, for one, after listening to arguments in one small local, don't envy him his job of controlling them all.

Secretary A. F. Eagles, so instructed by the local, has begun swinging a mean bludgeon in behalf of Station WCFL, relative to the radio trust, conceded to be the greatest menace to the public, and has sent copies of Senator Frank R. Reed's speech and resolution, on May 19, 1930, to our six Senators and Congressmen. Probably the majority of us little realize the importance of this situation and we should acquaint ourselves with actual conditions and not be misled by all we read in our favorite daily.

Past President James Nicholson recently paid us the honor of a somewhat unexpected visit. Jimmy is now in government radio service in Washington and his experiences for the past year have been in broader fields than Maine can offer.

An educational committee has been appointed, consisting of Brothers A. F. Eagles and J. R. Fraser, whose plans at present are for the promotion of a general school of progress and thereby further formulate the interrupted plans of Ex-President Nicholson, by education, study and practice, to make the laborer worthy of his hire.

M. M. McKENNEY.

L. U. NO. 595, OAKLAND, CALIF.

Editor:

The time of the month is here again to take my pencil in hand and write a few lines for the JOURNAL. Since last edition the contract for electric work on the new Ford plant at Richmond has been let to a San Francisco firm, although it will not be ready for crafts for some time yet and with plenty of men in the locals around the Bay idle, there will not be much chance or need for outside help. The Shell Oil Co. is doing some work at Pittsburgh, but as it is under very poor conditions we have had a request from Local No. 302 of Richmond for all men to stay away as their business representative with the help of the president of the State Building Trades and Doc. Stallworth, business representative, are working on this firm to try to make it a job for a white man.

So, boys, if you are coming this way please stay away from this job until further notice.

Times are progressing. Before the auto was common we called him the walking delegate, then the business agent, and he used an auto, now it is business representative, and I suppose he will want an airplane. Well, boys, we must keep up with the times, so let's go.

The unemployed boys are still enjoying their indoor sports and as the local just paid for a new top for the table it is a great pastime and it is common phrase as you mount the stairs to the office and recreation room to hear the old saying, "I raise," and "That's good," or "Wait until you get something."

I have noticed that some of the press secretaries are boasting their members as fishermen, but with S. F. Bay as a playground, Local No. 595 can boast of a few anglers, too, and I contend that this local has the meanest one of all. I mean by that any one who will catch a fish and tow it around on his line until he drowns it so as not to have any trouble in pulling it in. That is sure mean and tough on the poor fish. Give him a chance, Joe.

We have our new constitution now, so let's get behind the new points and put it over strong and make the I. B. E. W. the greatest International of them all.

ESHLEMAN.

L. U. NO. 636, TORONTO, ONT., CAN.

Editor:

At this time I wish to say a few words about our commissions on our public utilities in and around this city. We have been successful in placing at least one labor man on each of four of them. We have been successful recently in concluding agreements with the Scarboro and East York Hydro Commissions.

The Scarboro Commission agreement is a renewal with increased pay and conditions, and the East York Commission agreement is a new one. Both those agreements are considered very fair for these parts. In the case of the East York situation has meant an increase in our membership. In securing these agreements we must acknowledge the very fine and unsolicited assistance given us by Brothers H. Kirwin, in Scarboro, and to Jennings, in East York Hydro Commissions respectively. Both of those men are members of the Trade Union Movement. Brother Kirwin is a member of the I. A. of M., and formerly an International Representative of that organization. Brother Jennings is a member of the Postal Workers' Union. I have been a little slow in acknowledging their efforts on their behalf because we have another agreement that has been a little slower in coming through, so I feel that I can not hold out any longer on these two

cases. So we take this means of acknowledging their efforts in our behalf and we are truly appreciative of their efforts.

It is unfortunate that more men of the ability and sympathy of these men are not in such positions all over this and other countries. Their respective organizations may well be proud to have such men within their fold.

J. BROWN.

L. U. NO. 675, ELIZABETH, N. J.

Editor:

I have been told the best way to keep your readers interested is to discuss the current topics of the day. It seems the current topic to the organized electrical worker is the constitutional changes. This subject is discussed in every gathering where electrical workers are congregated. It has aroused the interest, or maybe the curiosity of the disinterested, but at any rate there is no doubt it is news.

Now, let us get down to the changes and do some sound thinking. True, there have been some radical changes made and what might seem a super-abundance of authority placed in the hands of some officers. But, like every change of importance that is made, at first it meets with the dissatisfaction of the majority, eventually however, everyone falls in line and we are all happy again. True also, one of the most important changes that ever confronted the people of these United States has been proven a failure. Now, if the constitutional changes do not meet with the approval of the majority of the organized electrical workers they will meet with the same fate.

There is one thing these changes should have some effect on and that is elections. It will teach you to vote intelligently and cut out the popularity contests. You know exactly what powers these officers have and if you vote in men who do not measure up to the required qualifications it is just too bad. While abuse of power cannot last it can do a tremendous amount of damage. It all simmers down to the theory that authority has the power to command and the subject is obliged to obey.

What really has caused so much discontent is the fact that there are so many self-seekers whose one thought is personal gain, that the average man is losing faith in human nature. Yet, an incident happened in this local that might be considered the exception to the rule but at the same time proved the true spirit of brotherly love. One Brother presented a bill to the local which in turn referred it to the trustees for investigation; however, the trustees felt that it was a matter for the body to act upon. In the mean time the Brother stated he needed the money, but seemed nothing could be done. One Brother, generally considered an enemy of the Brother in need, advanced half of the required amount. Here we have two Brothers at the very odds and yet when the one was down the other held out a helping hand. A wonderful example of the true spirit of brotherly love.

After a nine-year absence Brother Bolton, of L. U. No. 3, who ran the Willys-Knight job, the biggest ever in this territory, has returned to do a small job at the Standard Oil plant. He has changed very little and will always be remembered for his fairness in all matters.

Brother Al Schnare has gone north and to the local that has Al as a member let me say he is a square shooter and a true Brother of all that is fair. Al, wherever you may be, Jannett still thinks of you.

TIGHE.

Patience is bitter, but its fruit sweet.
—Rousseau

L. U. NO. 696, ALBANY, N. Y.

Editor:

Since my last letter our local union has suffered the loss by death of another Brother who has gone above to answer to his name, at the last roll call.

Brother Le Roy Hall was a good union man and worked faithfully for Local No. 696. He was a member of the Masonic Order and the Elks and had a very wide acquaintance-ship throughout Albany.

Local No. 696 regrets deeply the passing on of "Sonny" Hall and we all hope that this will be our last bereavement for a long time to come.

Business conditions in our city have remained in the same state as they were at my last writing. A few of the boys were called back to the state office job for a few weeks, but were laid off again today. This will give them a long Labor Day vacation but I know that they would rather be on the job and let the holiday season come later in the year.

At our last meeting it seemed strange not to see the board of trustees sitting in their accustomed place in front of the room, but by what I have read of the new constitution there will be many more strange but more businesslike methods of handling the local union's transactions.

Our worthy Brother Cummings feels a bit proud of his new title of business manager, but that will not mean any lessening of his labors, in fact he will have more work, so he had better come down to earth again and dig up a lot of jobs for the boys.

Our executive board has been checking upon the members who have not been attending meetings, who are back in their dues and in fact who are derelict in any way and the board is to be commended for the good work which it is doing. This checking up will show an increase in our treasury, if in no other way.

C. A. ROBERTS.

L. U. NO. 697, GARY, IND.

Editor:

Work has been very flighty this year, only a few men working until the Lever Brothers' soap factory came in. The Stone and Webster engineers and contractors did the general contract with a Mr. (maybe, Brothers, we never found out) Frank Wells and Gus Mayer, of Boston, electrical superintendents. Brothers Gust Schoop, Elmer McKay, Jack Dierheimer and Geo. Burke were foremen for L. U. No. 697, with about 140 members, so, Brothers, here was a life-saver for quite a few, but that is about all over now, as the layoffs are cutting down the vets until there is at present a good percentage out.

This seems a dull year for many places; hope for a break soon. Was in Toronto a few weeks ago; sorry, but didn't get to any of the meetings of Local No. 353. Liked your city, though. (Oh, yes!)

Well, Brother Ralph Brooks stepped into a nice job when he went as radio operator with the MacMillan expedition to the far north. Since then he has accepted a position with a radio corporation (didn't get the name). Very fine, Ralph; congratulations!

And then there is Brother Vincent McArty, air-minded as well as electrically, is a flyer now with only a few hours needed for license. Then where to, Mac?

Brother George Bowes, formerly business agent of Miami, Fla., but now with a card out of L. U. No. 3, New York, was on the soap job, as well as several traveling Brothers—Hawkins, of Des Moines, Iowa; a fellow from Hollywood, Calif., etc. But no such thing now as the traveling card such as I used to carry.

Brother Joe Lyons, I. O., has his card in Local No. 697 now; says he likes the western front. Eh, Joe? was on the job at 7:45 one morning; drove 15 miles to make it. Made his point o. k. Some man.

Brother Blair was re-elected for president and Brother Ray Abbott, the dean of business representatives, was elected again. (How many times, Ray?)

I could mention a lot of the boys and I know they would like it, but time is short. But I want you all to hear of the young and athletic fellows. Brother Connie Schoop, Johnny Cameron, Harold Hagburg and Rus McCarty, baseball, basket ball and everything. Oh, yea!

HARRY DUANE HEDDEN.

L. U. NO. 734, NORFOLK, VA.

Editor:

In the July number the Norfolk press secretary referred to our guests only as "the ladies," but our Washington press secretary changed this and referred to them as "the girls" and as "the fair ones."

It happens that they are girls and fair ones at that, but suppose that the Washington press secretary had been mistaken and suppose that the Norfolk press secretary had been held responsible for the mistake. I shudder when I think of what might have happened.

In the August issue the word Czechoslovakia was printed by the Norfolk press secretary, who spelled it with a doubleo, but the Washington press secretary spelled it with a wee.

Now I claim that we Czechoslovakians know how to spell Czechoslovakia.

Whenever I am wrong I will appreciate it if you put me right, but when I am right, please don't put me wrong.

Notice Fredericks of L. U. No. 176 wants the President to stop fishing and make appropriations.

Don't let 'em kid you, Freddie; the new constitution fails to cover that and Congress still makes the appropriations.

Borrowed a copy of the new constitution from Local No. 80 last night and with our disappointment increasing page by page we came at last to the back cover and to the realization that the committee had not betrayed us.

We then sorrowfully rolled up the red banner and tenderly laid it away for use at some future time.

SAUVAN.

L. U. NO. 743, READING, PA.

Editor:

Hello, friends! Back again with a new line of chatter, and a bit of news. We're going pretty good in this little old town despite the tough times. Almost all our men are working at present and all of us are expecting to be earning our daily bread in a short time. We've just added another large contractor to our fair list here. That brings our total to five. These have all been gotten in about two months' time. Our business agent, Brother A. P. Benner, has his mind made up with the worthy intention of getting a few more for us. He entertains a confident feeling of ultimate success, in regards to signing them, he tells us. That about explains our conditions at present.

It has been said that "A little pleasure, now and then, is relished by the best of men." With that in mind we fellows here and those from Easton and Allentown, decided to hold a joint outing. After a lot of planning and chasing, the set date rolled around and we gathered at a park about 20 miles from Reading. We had a good crowd and enjoyed a day of fun. The weather was just right and the crowd certainly seemed to

think that the "eats" were the same. I'm sorry I can't furnish any pictures, but maybe it's just as well that I can't. They might make some of you jealous. Easton and Reading were well represented at this affair, but Allentown is having a rather hard pull just now and they only had one man there.

The new constitution certainly gave us a surprise. I want to take this opportunity, in behalf of Local No. 743, to congratulate President Broach and the revising committee, on a splendid bit of work. Living up to the new rules is sure going to put some pep into all of us. We can well use that stimulation.

ALBERT R. HARTMAN.

L. U. NO. 817, NEW YORK CITY

To Railroad Electricians

Editor:

This local union has planned to hold a special meeting September 11, next, the occasion of a visit by International Vice President C. J. McGlogan, and Organizer J. J. Duffy, who was also a member of the constitution committee, which recently adjourned in Washington. Brothers McGlogan and Duffy will explain the various articles of the revised constitution, and their application to railroad local unions; and we trust that the membership of L. U. No. 817 will be more enlightened on how best to meet the problems and conditions existing on the New York Central Lines.

President Alban J. Fee, and all the other officers of this local union, are contending with the most difficult employment situation since 1922. The construction and repair men have been working five days a week for many weeks and this condition, considered with the wage rates now in operation, has made it obligatory for many of the men to scratch hard in order to make income and expenses meet, without going into debt.

These "hard times" through which we are now passing will test the courage and fortitude of many people to the utmost, and the question is asked in many localities, what the conditions will be next winter and how best to prepare to meet them. All labor organizations must, by every means within their power, "buck up hard" to prevent the occurrence of a general "shake down" in wages and salaries, with its consequent lowering of our living standards and public spending power. When will wage and salary workers ever learn that it is only through organization that any results can be attained toward better working and living conditions? And the paradox of it all is that railroad workers, who must be intelligent in order to hold their jobs, including the many electrical men on the New York Central Lines, still think they are going to get something valuable for nothing.

Some of these non-union men are such "cheap skates" that they think they are "putting it over" by sharing in the wage and working conditions obtained by the railroad local unions without joining them, and paying what would be only their just share of the expenses of running the organization. It has been said that "every fool laughs at his own folly" and "the biggest fool is the fool who fools himself." It never occurred to these non-union men that with their support in the organization better wage rates could be obtained in which they would share. It is this class of misguided men who have not yet learned that labor is not paid what it is worth, but in most cases is paid as little as the employer can persuade men to work for, with a studied parsimony as to wages paid for the services performed.

Good wages and working conditions are conducive to a broad perspective of life, to-

gether with the means for educational improvement, which enables railroad men to render better and more valuable service to the common carriers who employ them and service is the commodity which the railroad sells to the traveling public and freight shippers. The advance in wage rates during the last 20 years, which in most cases have been secured by organized labor, have also benefited the supervisory forces on railroads, as the foremen and executives know that their salaries always bear a relation to the wage rates paid to the men who work under their direction.

There is another class of men who think it a matter of small consequence to pay dues into many existing fraternal organizations, which can never under any conditions protect their bread and butter, and yet this is the kind of service which a good labor organization actually performs for its membership. Add to this the insurance protection, together with old age pension, and the facilities for obtaining employment in other localities through the use of the traveling card and it becomes evident that labor organizations perform a service which cannot be equalled by any other existing form of employment service.

Trade unionism is one of the most important branches of industrial economics, which can be clearly understood only after years of practical experience in industry, and studied observation of industrial changes, which affect the working and living conditions of the workers. We live in a world of constantly changing conditions of life and vocation, which necessitates continual readjustment of working conditions and wages, and it is only through the organizations of workers that a fair return in wages or salaries for services performed can be obtained.

In consideration of harmonious relations between union men on the railroads and the foremen and executives, the unions have brought about a better understanding, as between employee and employer, which has facilitated the adjustment and settlement of all kinds of grievances. This condition had its inception in Supplement No. 4, of General Order No. 27, issued by former director general of railroads, W. G. McAdoo, in 1917, during the administration of that great statesman and war president, the best friend the railroad man ever had, Woodrow Wilson. It was during Wilson's administration that the Adamson eight-hour law was promulgated, reducing the railroad man's day from 10 and 12 hours to eight hours, which laid the foundation for the increased rates of pay.

The engineering trend of nearly all railroads today is toward the elimination of the coal-burning engine, and the development of the oil-electric engine, or the extension of the all-electric zones. This trend means the employment of many more electricians by the railroads in the future, and with the support of the union, railroad electricians can feel assured of lucrative employment for many years to come.

W. A. CRAFT.

L. U. NO. 828, SEATTLE, WASH.

Editor:

All things must have a beginning, so here is where Radio Local No. 828 bursts into print with a big splatter of sparks, and may we hope that radio organization will get a lot of much needed advertising from my feeble efforts.

Since this local was issued its charter we have had our ups and (due to existing conditions) downs, mostly downs. From what we have heard from the eastern part of the country we note that the idea of organizing

radio is slowly but surely sweeping the country. Fine! Give us lots of it.

Several of our members have received copies of the JOURNAL and have told me that it makes them feel more like men and that they were getting somewhere since they are members of the I. B. E. W.

This local has been more or less one of the pioneers in the field of radio organization and we will be glad to give any one who inquires the benefit of our experience, such as it is. We are very grateful to the members of Local No. 46, here in Seattle, who have been untiring in their efforts to help us along a path that has been anything but rosy.

Agreements were printed and just before they were presented for signature we had word from Mr. McLean of the International Office, in charge of radio, to "Lay Off" as we might set a precedent that would prove detrimental to the best interests of the country at large. Some of our members were kind of worried that these agreements were not presented. We are now sitting tight, awaiting word from the International Office as to our next move.

While this local has its own charter, it will speed up the work if existing locals throughout the country will put out feelers and try to get the radio operators and service men in their cities into their locals. This applies particularly to coast cities such

as San Francisco, Los Angeles, New Orleans, etc.

It will be found in most cities that there are not enough radio men to warrant getting a separate charter. The men, however, should be brought into existing locals where they may have the benefit of the older and more experienced heads. If this assistance is given, as it has been here, it will be no time at all before radio throughout the country is organized and the I. B. E. W. has 10 or 20,000 new members.

E. J. CLARK.

L. U. NO. 854, BUFFALO, N. Y.

Editor:

Just a few lines from the new secretary of Local No. 854 at Buffalo. This is my first letter so I am just learning the ropes. Conditions in and around Buffalo are about the same as they have been for some time past. But we are working to better them all the time.

The boys of Local No. 854 want to thank Chairman Brother McCullough for the good work he has done in getting the six-day week in the engine terminals and car lighting department of the depots. They also want to thank the International Office and the organizer that was in this district for some time helping to put Local No. 854 on its feet again. At the meeting of July 9, which was

called a special meeting to vote on the per capita tax increase, after the meeting refreshments were served. The party was all right, but Brother C. N. Schmidt said, "Bill Blake," of No. 912, ought to be there. When are you coming to Buffalo?

The outside building part of the work is not going very strong at this time either. It being almost time to leave for meeting I will sign off.

W. H. HELWIG.

L. U. NO. 948, FLINT, MICH.

Editor:

L. U. No. 948 opened its first meeting under the new constitution, August 18. It was short, snappy and strictly all business. Thanks to the new constitution committee for the brevity of the meetings and all changes in the Constitution. No doubt some members will not like all the changes but don't forget, if we could have had one member of each local on the constitution committee and each one should have had their say, our new constitution would be larger than the New York city directory. Sounds foolish, don't it? But I believe that is the way some of our Brothers wanted it, or better still, let the entire membership meet in one place and make the constitution, then the I. O. would have to supply a trailer to cart it on.

Brothers, some of us are too hard to please. I haven't double checked all the tickets of the Brothers on the constitution committee, but I've a good idea the ink is good and dry on most of them and they know organized labor's needs as well as some of you Brothers doing the squawking. We must go forward with the times and employ only the latest business methods if we would keep organized labor ahead.

Brother Davis, one of our worthy International Representatives, attended our meeting of July 21 and gave us a very interesting talk on the business and financial interest of the local. Our election of officers of July 1 was ruled illegal by International Representative Brother Joe Lyons, on account of not being properly conducted, as I understand it, and a new election was held under the supervision of Brother Lyons. The officers were elected and installed as follows: President, Brother G. Jackson; vice president, Brother H. W. Carter; recording secretary, Brother K. H. Grimes; treasurer, Brother J. R. Young; financial secretary, Brother Don Heineman; business manager, Brother A. W. Taylor.

Brother B. A. Knight, delegate to the Flint Federation of Labor, tells us that we may get a new meeting hall, since our present lease has expired, but a new hall has not been engaged as yet.

And now, in conclusion, a word to our wandering Brothers and others who may be thinking of changing location. We have 10 men on the rocks now, with more to come. It don't look so good in Flint.

D. O. TAYLOR.

The New Member

Editor:

What does the man who makes application for membership know about the International Brotherhood of Electrical Workers, of its policies, its benefits, its interest in the member and his family? I believe I can safely say that the new member does not know very much. He is informed of the amount of his initiation fee, his dues, and his E. W. B. A. fee and in most cases he is told who the business manager is. His entire knowledge of the movements of this great machine, the International Brotherhood of



FROM AN OLD TIN TYPE. THIS GROUP OF ELECTRICAL WORKERS POSED AT THE COLUMBIA MEMORIAL BUILDING IN CHICAGO IN 1893. NOW THE SECOND WORLD'S FAIR IS SCHEDULED AND CHRISTOPHER SEIBEL, WHO APPEARS SECOND FROM THE RIGHT, WONDERS HOW MANY OF THESE BROTHERS STILL DO DUTY.

Electrical Workers, is about as understandable as yours would be about the movements of a worm under three inches of mud.

Generally speaking these are the kind of men who after they have been members about six months begin to ridicule, condemn and curse all and sundry who do not hold the same cracked-brained opinions they have.

Our International Union is a business, not a secret society, not a racket. It sells you a membership into a society of mechanics and sells your labor to the highest bidder. Let us start now to solicit members in a business-like manner. Investigate the candidate, inform and instruct him about the operation of our union. Let us enroll men who are capable and conscientious.

GARRETT E. JACKSON.

L. U. NO. 1037, WINNIPEG, CAN.

Editor:

I missed last month but I noticed a lot more missed also and besides I was on my vacation, and I don't think anybody should work during vacation anyway, and besides some of you may think this isn't work, but I know of fellows who get good money for writing, not very much money, but what they do get, is good, and oh! What's the use?

Now I want to tell you about a chap named Max Hallock, an old member of No. 1037, a lineman employed by the Winnipeg Electric Company. Max was working on a hot pole last April with Bill Fletcher when in some way Bill got his hand across 2,200 volts. Max knocked the hand off and held Bill until he came around and now he had his picture in the papers and is the proud possessor of a Royal Canadian Humane Society medal, and you don't get them medals for writing letters to the I. B. E. W. JOURNAL.

We have been having a summer up here this year; 90 to 95 degrees in the shade has been common and what with the current heat, the invasion of thirsty Americans, and Brother G. Cameron there has been a decided scarcity in the beer supply.

It's too hot to write any more and besides I haven't got anything to write about. I heard that "Red" Davidson and Bill Norris both went up a pole the other day and they both had copper sleeves in the pockets when they needed them, but I believe it is a lie anyway, it was Harry Jackson that told me the story and—all right.

The local and Brotherhood wish to extend to Brother W. Schriver their deepest sympathy to him in the loss of his wife.

IRVINE.

Women's Auxiliary

WOMEN'S AUXILIARY L. U. NO. 84, 613, AND 632, ATLANTA, GA.

Editor:

Labor Day is almost here. Our auxiliary is planning to be in the parade 100 per cent strong.

The two previous parades our auxiliary have participated in were splendidly attended by our members. The first year we rode in a bus. Last year we rode in private cars, and this year we will do the same.

Everyone plans to wear their prettiest frock, with a jaunty little cap and badge. We hear we are to have our pictures taken, too. We will have to primp up tremendously to be in the same class with our men folks. They have outdone themselves this year as to uniforms. Snappy? "Check and double check!"

Indian Summer will soon be here and then just over the hill "Ol' Man Winter."

Those of us who shed our cares temporarily during vacation once again take a more serious view of life, winter, school and all its attendant burdens.

We are hoping there will soon be an abundance of work for all.

During July three very new members were added to our ranks. A son arrived at the home of Mr. and Mrs. Dan Bignardi. A son to Mr. and Mrs. George Kilburn. A daughter to Mr. and Mrs. Dan Boone. All are fine, healthy youngsters.

Very best wishes to all three.

MRS. CHARLIE BOONE.

WOMEN'S AUXILIARY L. U. NO. 308, ST. PETERSBURG, FLA.

Editor:

Hello, Savannah, Mrs. H. Resin, our president, and myself are from Savannah, so we had to say hello. We see you are doing things over there. Congratulations! I think it is great, don't you?

Our auxiliary met Monday evening, August 4, at the home of Mrs. H. Resin, 612 16th St. North.

This was our third meeting. We are doing fine. There were quite a number of members present, general business was gone into detail, pro and con of this and that was discussed.

Our meetings are held the first Monday in each month and so arranged that it will be a social affair for the I. B. E. W. Brothers as well. This week the men had card games while the women served cake and cold drinks. As soon as it gets cooler we are going to give them a duck supper.

We are still looking for new members and hope to make this a 100 per cent organization. Let us hear from Savannah and any other auxiliary secretaries.

MRS. MALCOLM MARKS,

1404 7th Ave., North.

WOMEN'S AUXILIARY, L. U. NO. 508, SAVANNAH, GA.

Editor:

Gee, it looks like I am about to fall down on my job. Sorry I didn't get my letter in in time last month, but I bet you won't catch me napping again.

The writer sure did read some fine letters in the JOURNAL last month, and want to thank the Atlanta auxiliary for praising our president, but we can say the same thing about your president, Mrs. Stroud, from what Mrs. Tolle has told us, and she is always telling us what a wonderful auxiliary you all have.

Our auxiliary is giving a weiner roast next Wednesday night, August 27, and if

everybody likes a weiner roast as well as I do, I know we will have a big time, but we haven't had anything yet that we didn't have a grand time, as we have such a jolly good bunch. Wish all of you could be with us some time on one of our picnics. I tell you what, let's have a convention next summer if everything goes well, which I hope it will. We could have a nice convention in one of our auxiliary cities, then we could meet each other, which I think will be so much nicer than writing to each other through the JOURNAL, don't you? You ladies think this over and let me have your reply in next month's JOURNAL.

MRS. LESLIE JOHNSON,

109 W. Perry St.

READY-MADE HOMES NOT SO CHEAP AS THEY LOOK

(Continued from page 498)

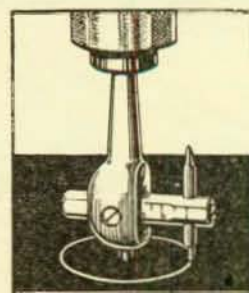
ciations have performed great service in this field, but they cannot without assistance, carry the burden. First mortgages, carried so largely by the savings banks and insurance companies, have been affected by competition with bonds and other forms of investment. Second mortgages, which are also necessary to many people, have, if we take into account commission, discounts and other charges, risen in rates in many cities to the equivalent of 20 or 25 per cent per annum, all of which not only stifles home ownership but has added to the present depression by increasing unemployment in the trades involved."

In spite of calamity howling by speculative builders with vacant houses on their hands, the country is not overbuilt residentially. Many families would prefer to move from rented apartments or houses to homes of their own, if it were financially possible. The decline in residential building in the past few years might be traced directly to the difficulty and expense of financing. Some of the fees, discounts and high interest rates need to be pruned away to make home owning the good investment it normally should be. If this could be done, the factory-made house would not offer the individually built home the competition it now does.

The building game has become a battleground for substitutes. There are substitutes for lath, substitutes for brick, for stone, for tile and for wood. But there will never be satisfactory substitutes for the thought, skill, taste and workmanship that go into the well-designed individual house. It is up to unions and to the public to see that, in the mass production scramble, these qualities are not lost.



"JIFFY" SOLDER DIPPER solders 50 to 75 joints with one heat. Does not smoke the ceiling, spill or burn the insulation.



"JIFFY" JUNIOR CUTTER

Cuts holes 1" to 3" in diameter in sheet metal, outlet boxes, bakelite, etc. Fits any standard brace. It may also be used with drill press. Special this month only. Solder Dipper, \$1; Junior Cutter, \$2.75 Prepaid; if accompanied by this ad and remittance.

----- Mail Today -----

PAUL W. KOCH & COMPANY (Established 1915) Civic Opera Bldg., Chicago, Ill.

Enclosed find

☐ Send me a Dipper @ \$1.00. Name _____

☐ Send me a Junior Cutter @ \$2.75. Street _____

☐ Send complete Jiffy bulletin. City _____

9-30. Money back if not satisfactory. "Originators of Jiffy line of labor savers."

"PLEASE REMIT"

Scene—Desk Top.

Characters { Lead Pencil.
Fountain Pen.

Time—First of the Month—11:00 P. M.

Lead Pencil: Gee, I'm tired! I've been making figures so fast for the last three hours I'm dizzy.

Fountain Pen: Don't forget I made out the checks after you got through—some work to that!

Lead Pencil: The Boss paid out a lot of money tonight and he was mighty grouchy about some of it.

Fountain Pen: Yes, wasn't he? I'm used to hearing him chew about the meat and grocery bills—but Boy! was he sore when he glimpsed that last garage bill—whew!

Lead Pencil: No worse than when he saw the millinery bill from the Highest Department Store—why, he said—

Fountain Pen: There—there—don't tell me what he said. Strong language always makes me spill my ink. Half the time that's why I make blots, if the Boss only knew it. He yanks me across the paper so I can't help scratching.

Lead Pencil: I was glad to see him finish up smiling. That last check seemed to please him. What was it about, anyway?

Fountain Pen: Well, when he got through, he found he had enough left in the bank to write a check for those insurance policies. I remember reading over the applications when I filled them out last month and I knew how good they were. It worried me because I heard the Boss sigh when he put them back in the desk without having me write the check—guess that's why he stormed so when some of the bills were bigger than he expected. I heard him tell the Mrs. that he felt sort of happy and light-hearted as though he had really accomplished something this month. He mentioned how small the check was and how much it meant, compared to some of the big ones paying for things that meant so little.

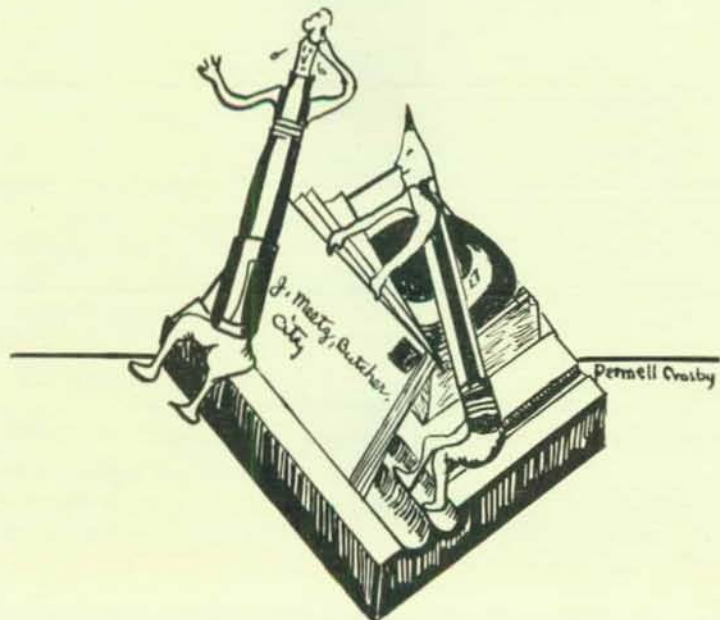
Lead Pencil: For goodness sake! You talk as though you might have belonged to an insurance agent once. How did you learn so much about it?

Fountain Pen: I wouldn't have to know much about insurance to know that a penny a day is a pretty low rate—now, would I?

Lead Pencil: I suppose not, but, say, did you hear him tell her they would celebrate with a dinner and show? I think that's extravagant when he fusses so about expenses.

Fountain Pen: Oh, go to sleep! This constant figuring will make you go Scotch yet. Can't a fellow play once in a while?

How much better the "play time" will seem if you know your family is protected in the Family Group—DON'T WAIT—DO IT TODAY.



APPLICATION FOR INSURANCE ELECTRICAL WORKERS' FAMILY POLICY

UNION COOPERATIVE INSURANCE ASSOCIATION,
Washington, D. C.

I certify that I am the of a member
(Give relationship)

of the International Brotherhood of Electrical Workers, Local Union No., and I hereby apply for

units or \$ life insurance, and will pay \$ each
for same. (Year, half-year, quarter or month)

I certify that I have no impairment in my health or physical condition, and have no deformity, except

(State any exceptions)

Date of Birth Occupation Race
(Month-Day-Year)

Birthplace Sex

Beneficiary Relationship
(State full name and relationship of person to whom insurance is to be paid at your death)

Address of Beneficiary

My name is
(Print your name in full—not initials. If married use own name, such as "Helen Smith" and not husband's name, as "Mrs. James Smith")

My address is
(Street and number—City and State)

Date
(Signature in full)

QUESTIONS BELOW TO BE ANSWERED IF APPLICANT IS A MINOR

1. Father of Child.	Full Name	Birthplace
	Birth Date	Occupation
2. Mother of Child.	Full Name	Birthplace
	Birth Date	Occupation
3. Premiums will be paid by:	Name	
	Address	

(Signature of Parent or Guardian)

(The Union Cooperative Insurance Association reserves the right to reject any applicant for this insurance for any cause whatever and in case of rejection will return to the applicant the full amount of the payment forwarded with this application. The insurance will become effective on date issued by the Union Cooperative Insurance Association at its Home Office in Washington, D. C.)

NOTE: Age limits, 1 to 50 years. Issued in units of \$250.00. Limit of insurance for any one person: Ages 1-5, inclusive—\$250.00. Ages 6-50, inclusive—\$500.00.

Cost per unit: If paid annually, \$3.60; Semi-annually, \$1.80; Quarterly, 90 cents; Monthly, 30 cents or "Penny a Day."

Receipts issued for premium payments will show date next payment is due. No additional premium notices will be sent.

Make Checks Payable to
INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS
G. M. Bugniacet

and Send with Application to International Brotherhood of Electrical Workers, Washington, D. C.

(Family Group Policy—Application Copyright, 1928, J. R. Biggs)



IN MEMORIAM

Henry (Harry) C. Lubbers, L. U. No. 2

Whereas the members of Local Union No. 2, of the I. B. E. W., deeply regret the sad and sudden loss of our esteemed Brother, Harry C. Lubbers, a true and loyal Brother; therefore be it

Resolved, That we extend our heartfelt sympathy to the bereaved family; and be it further

Resolved, That we drape our charter for a period of 30 days, a copy of these resolutions be spread on the minutes of Local Union No. 2 and also a copy be sent to the International Office for publication in our official Journal.

JOHN CHARLES WINGREN,
LEON C. BRADLEY,
BOB H. LLUFNER,

Committee.

Al Strom, L. U. No. 9

Whereas it has pleased Almighty God, in His infinite wisdom to call from our midst our worthy and esteemed Brother, Al Strom; and

Whereas in the death of Brother Strom Local Union No. 9, of the International Brotherhood of Electrical Workers, has lost one of its most loyal and devoted members; be it therefore

Resolved, That in the passing of Brother Strom Local Union No. 9 hereby expresses its appreciation of his great services to our Brotherhood and it extends its condolence to his family in their irreparable loss; and be it further

Resolved, That a copy of these resolutions be sent to the family of our late Brother and a copy be sent to the official Journal of our Brotherhood for publication.

DAN. MANNING,
RALPH BREHMAN,
HARRY SLATER,

Committee.

Claude Brooks, L. U. No. 17

Whereas Almighty God, in His infinite wisdom has seen fit to remove from our midst our respected friend and Brother, Claude Brooks; therefore be it

Resolved, That we extend our sincere sympathy and condolence to his bereaved wife and family, that they may be strengthened in their sorrow and bereavement; and be it further

Resolved, That a copy of these resolutions be sent to the family of Brother Brooks, a copy to the Journal of Electrical Workers, and a copy be spread upon our minutes; and be it further

Resolved, That our charter be draped in mourning for a period of 30 days in memory of our departed Brother.

WILLIAM FROST,
WILLIAM MCMAHON,
M. I. SPECK,

Committee.

C. J. Ellis, L. U. No. 66

The onward march of time is marked by the passing of friends and loved ones. We can only bow in sorrow at the parting of the way.

In realization of your bereavement, our sympathy, heartfelt and deep, is extended to the loved ones left behind and we would assure you of our desire to afford such comfort as friendship can command at such a time.

May we have comfort in these words:

"The stream is calmest when it nears the tide,
The flowers the sweetest at the eventide,
And birds most musical at close of day,
And saints divinest when they pass away.

"Morning is lovely, but a holier charm,
Lies folded close in evening's robe of balm
And weary man must ever love her best
For morning calls to toil, but night to rest.

"She comes from Heaven, and on her wings
doth bear,
A holy fragrance, like the breath of prayer—
Footsteps of angels follow in her trace,
To shut the weary eye of day in peace."

L. M. KAYS,
F. C. CALLENDER,
F. B. STURGIS,
G. I. COWAN,
JNO. A. GRIFFIN,

Committee.

A. M. Kincart, L. U. No. 48

Whereas the Almighty God, Supreme Ruler of the Universe, has seen fit in His infinite wisdom, to remove from our midst our brother, A. M. Kincart; and

Whereas Local Union No. 48, of the I. B. E. W., has lost in passing of our Brother, a long-standing member and a loyal trade unionist, whom we shall miss from our midst; therefore be it

Resolved, That we, in a spirit of Brotherly love, pay tribute to his memory by expressing our sorrow at his loss and extend to his family our deepest heartfelt sympathy in their hour of bereavement; and be it further

Resolved, That a copy of these resolutions be spread on the minutes of Local Union No. 48, of the I. B. E. W., and a copy be sent to the official Journal of the Brotherhood for publication, and that our charter be draped for a period of 30 days.

F. L. BOURNE,
L. A. GARWOOD,

Committee.

Fredrick Wright, L. U. No. 52

Whereas the Supreme Ruler of the Universe in His infinite wisdom has seen fit to call from our midst our esteemed Brother, Fredrick Wright; and

Whereas his many friends and fellow workers in Local Union No. 52 deeply regret his sudden and unexpected death; therefore be it

Resolved, That we, as a union, pay tribute to his memory by expressing our sorrow at his untimely death, and extend to his family our deepest sympathy in their hour of bereavement; and be it further

Resolved, That a copy of these resolutions be spread upon the minutes of Local Union No. 52, a copy be sent to the family of our late Brother, and a copy be sent to the International Office to be published in our official Journal.

W. DODGE,
M. OVERLACK,
J. GILLIGAN,
E. SCHROEDER,

Committee.

Harvey Watson, L. U. No. 58

It is with deep regret that the members of Local Union No. 41, of Buffalo, N. Y., learned of the death of the late business representative, Harvey Watson.

It is our sincere desire to pay tribute to his memory and sympathize with the members of his family.

Resolved, That a copy of these resolutions be sent to the home of our departed Brother, a copy be spread on our minutes, and a copy be sent to the official Journal for publication.

WILLIAM E. MARY,
President,
WILLIAM P. FISHER,
OTTO C. HOLZER,

Committee.

Clyde Hoobler, L. U. No. 59

Whereas the Almighty God in His infinite wisdom and mercy, has removed from our midst our worthy Brother and friend, Clyde Hoobler; and

Whereas in the death of Brother Hoobler, Local Union No. 59, of I. B. E. W., has lost a true and loyal Brother; therefore be it

Resolved, That Local Union No. 59 recognizes its great loss in the passing of Brother Hoobler, and extends its sympathy to the family in this their hour of bereavement; and be it further

Resolved, That a copy of these resolutions be sent to the family of our late Brother, and a copy be sent to the official Journal of the I. B. E. W., and a copy be spread on the minutes.

S. R. BRYANT,
President,
T. D. BETTS,
Secretary.

H. M. DUKE,
W. S. GORDAN,
T. C. ESTES,
F. M. KESSEY,
F. E. CROSS,

Executive Board,
Committee.

John Friend, L. U. No. 309

Whereas Almighty God, in His infinite wisdom, has removed from our midst our worthy Brother, John Friend; and

Whereas in the death of Brother Friend Local Union No. 309, of the International Brotherhood of Electrical Workers, has lost one of its true and devoted members; therefore be it

Resolved, That Local Union No. 309 recognizes its great loss in the passing of Brother Friend and hereby expresses its appreciation of his services to the cause of our Brotherhood; and be it further

Resolved, That a copy of this resolution be placed on the minutes of the local union and a copy be sent to the official Journal of our Brotherhood for publication.

E. P. DOYLE,
President,
A. P. DOHL,
Recording Secretary,
Committee.

George Ross Cook, L. U. No. 349

Whereas Almighty God in His supreme wisdom has seen fit to remove from us our loyal Brother, George Ross Cook; and

Whereas this local has lost a true and faithful member; be it

Resolved, That Local No. 349, I. B. E. W., extend our heartfelt sympathy to his bereaved relatives in this their great sorrow; that a copy of this resolution be sent to his family; a copy to our official Journal, and our charter be draped for a period of 30 days; and be it further

Resolved, That this local stand in silence for a period of one minute as a further tribute to his memory.

RAY ROBERTS,
J. W. ELDER,
J. D. RODGERS,
Committee.

Louis Maurice Nicoulin, L. U. No. 369

Whereas it has pleased Almighty God in His infinite wisdom to take from our midst our beloved Brother, Louis M. Nicoulin; and

Whereas in his fellowship we have recognized in him the spirit of a true and loyal Brother; therefore be it

Resolved, That we extend to his bereaved family our profound sympathy and consolation, and trust that God will grant them that comfort in their great sorrow which he alone can give; and be it further

Resolved, That our charter be draped for 30 days in respect to his memory and that a copy of this resolution be sent to the family of our deceased Brother, a copy be sent to our official Journal for publication and that a copy of it be spread on the minutes of the Local Union.

I. METCALFE,
ROBERT BARRY,
L. C. KARLIN,
Committee.

O. N. Mitchell, L. U. 382

Local Union No. 382 deeply regrets the departure from this life of Brother O. N. Mitchell, although he had only been a member of this local for a short while in which time he had many friends among the boys.

Brother Mitchell was killed by heavy charge of electricity in his garage on June 21, 1930. He leaves a widow and two children.

As it has pleased Almighty God to take from his loved ones Brother Mitchell, at this time of great sorrow we, the members of Local No. 382, extend our sympathy to the bereaved family; and be it further

Resolved, That the charter be draped for a period of 30 days and a copy be sent to the bereaved family, a copy spread upon our minutes and a copy be sent to our Journal to be published.

MARION C. WHITE,
C. C. DOUGLAS,
J. W. McCURLEY,
Committee.

Bert Hall, L. U. No. 453

Whereas Almighty God, in His supreme wisdom has seen fit to remove from our midst our worthy Brother, Bert Hall, we extend to the bereaved family our sincere sympathy, and commend them to God for comfort in their hour of sorrow; and therefore be it

Resolved, That our charter be draped for a period of 30 days in his memory, a copy of these resolutions be sent to our official Journal and a copy be spread on the minutes of our local.

HAROLD STAHL,
C. W. LAMONS,
DAN MAXEY,
Committee.

W. E. Headley, Jr., L. U. No. 408

Whereas it has pleased Almighty God to draw to a close the earthly life of our esteemed Brother, W. E. Headley, Jr.;

Whereas in the death of this Brother, Local Union No. 408 suffers the loss of one who was a faithful member in time of strife as in time of tranquillity; and

Whereas his family is deprived of one who was at all times and in all things loyal and true; therefore be it

Resolved, That this local union formally express its sorrow at the loss it has sustained, and its sympathy for the members of his family; and be it further

Resolved, That the charter of this local be draped for a period of thirty days; that a copy of these resolutions be engraved and sent to his family; that a copy be sent to our International Office, and that a copy be spread on the minutes of our meeting.

E. G. HUGHES,

LAWRENCE PERRIOR,

G. C. RICHARDSON,

Committee on Resolutions.

Charles Page, L. U. No. 535

Whereas Almighty God has reached into our midst and has taken from us one who has constantly striven to attain the ideals for which the organization was founded; and

Whereas the members of L. U. No. 535, I. B. E. W., deeply regret the death of our friend and Brother, Charles Page; therefore be it

Resolved, That a copy of this resolution be sent the family of our late Brother, a copy be spread on the minutes of the union, a copy be sent to the Journal for publication; and

Resolved, That we drape our charter for a period of 30 days.

R. BROCKMAN,

G. L. VAUGHN,

C. K. LOHMEYER,

B. MCNEALY,

E. LYCAN,

H. L. MESSEK,

Executive Board.

Fletcher Smeathers, L. U. No. 616

Whereas it has pleased Almighty God, in His infinite wisdom to call from time to eternity our worthy Brother, Fletcher Smeathers;

Whereas in his death L. U. No. 616 has lost a true Brother, and the Brotherhood a union man, tried and true;

Resolved, That in the passing of Brother Smeathers, L. U. No. 616 hereby expresses its appreciation of his great service to our Brotherhood, and it extends its condolence to his family in their irreparable loss; and be it further

Resolved, That a copy of these resolutions be sent to the family of our late Brother and a copy be sent to the official Journal of our Brotherhood for publication.

E. L. MITCHELL,

W. T. BROWN,

J. W. DUNCAN,

Committee.

Edward Le Roy Hall, L. U. No. 696

Whereas Almighty God, in His infinite wisdom has seen fit to call from our midst our esteemed and worthy Brother, Edward LeRoy Hall, who has passed on to his greater reward; and

Whereas it is with saddened hearts and a feeling of deep regret that we, the members of Local Union No. 696, are called upon to pay our last respects to our worthy friend and Brother; therefore be it

Resolved, That Local No. 696 extends its condolence to the family of Brother Hall in their great loss; and be it further

Resolved, That in respect to the memory of Brother Hall, our charter shall be draped for 30 days and a copy of this tribute spread upon our minutes, copies being forwarded also to his beloved ones, and to our Journal for publication.

F. W. CUMMINGS,

H. WINEGARD,

R. FREDENBURGH,

J. DOMERY,

T. NUSBAUM,

Committee.

J. J. Geroux, L. U. No. 914

Whereas Almighty God in His infinite wisdom has called J. J. Geroux from our midst; and

Whereas we humbly bow our heads in submission to His will, we deeply mourn the taking away of an associate of ours, and a true and loyal member of Local Union No. 914; therefore be it

Resolved, That we extend our heartfelt sympathy to his wife and sons; and be it further

Resolved, That a copy of these resolutions

be spread upon our minutes, a copy be sent to our official Journal for publication; a copy be sent to the bereaved family and our charter draped for a period of 90 days.

ALFRED G. KING,

FRED JOHNSON,

JACK CALDER,

Committee.

NEW GROUP OF HONORED MEMBERS FILE FOR PENSIONS, AUGUST

In accord with the provisions of the constitution requiring that the International Secretary "shall publish the name of the applicant and the number of the local union of which the applicant is a member in the two issues of the official JOURNAL preceding the next meeting of the I. E. C.," the list making application for the Brotherhood pension, is herewith appended:

L. U. No. 3	George F. Davis.
L. U. No. 3	Chas. S. Greene.
L. U. No. 3	Albert W. Huck.
L. U. No. 3	A. C. Sullinger.
L. U. No. 3	Henry A. L. Tiemann.
L. U. No. 3	Richard S. Thomas.
L. U. No. 3	H. C. Weissner.
L. U. No. 43	J. F. Williams.
L. U. No. 52	George W. Shepherd.
L. U. No. 83	H. M. Scott.
L. U. No. 130	S. G. Clissold.
L. U. No. 134	John G. Buick.
L. U. No. 134	F. P. Kinsley.
L. U. No. 134	F. E. Lockman.
L. U. No. 134	Frank Mally.
L. U. No. 134	W. E. McFadden.
L. U. No. 151	A. Wagner.
L. U. No. 212	George Rost.
L. U. No. 595	W. S. Tyler.
I. O.	Wm. M. Jeffreys.
I. O.	R. Lavoie.
I. O.	Chas. Murphy.
I. O.	John H. Berkeley.
G. M. BUGNAZET,	
International Secretary.	

DEATH CLAIMS PAID FROM AUG- UST 1, INCLUDING AUGUST 31, 1930

Local No.	Name	Amount
3	F. J. Schotty	\$1,000.00
134	R. C. Peterson	650.00
66	W. Boger	1,000.00
349	G. R. Cook	1,000.00
134	E. T. Neil	1,000.00
616	Fletcher Smeathers	1,000.00
3	Jas. M. Goodbody	1,000.00
3	Herman Daug	1,000.00
48	A. M. Kinsart	1,000.00
535	C. V. Page	1,000.00
134	J. G. Warns	1,000.00
17	C. Brooks	1,000.00
52	F. C. Wright	1,000.00
164	W. H. Hoelz	300.00
2	H. C. Luebbbers	1,000.00
429	L. E. Givens	1,000.00
453	Bert Hall	1,000.00
134	Jacob Goodman	1,000.00
9	A. Strom	1,000.00
411	V. B. Skoggs	1,000.00
195	Alfred Davis	1,000.00
134	Claude Chenoweth	1,000.00
474	Jas. G. Kitchen	300.00
396	J. L. Holian	1,000.00
38	R. L. Brasch	1,000.00
309	J. L. Friend	1,000.00
3	T. M. Wood	1,000.00
64	W. N. Governor	1,000.00
38	M. B. Callahan	1,000.00
134	J. Tracey	1,000.00

102	Chas. Bradbury	1,000.00
532	John M. Hobbs	825.00

\$30,075.00

Total Claims paid from August

1 to and including August 31,

1930 \$30,075.00

Claims previously paid 2,048,611.10

\$2,078,686.10

BOULDER DAM, SIX ENGINEERING PROJECTS IN ONE

(Continued from page 501)

horizontal area involved. The time required to complete the mass concrete work is estimated at about two years and eight months.

The dam will be a curved gravity structure, designed for a maximum stress of 30 tons per square foot, and recommended by the Colorado River Board. The stresses in the section are being determined by the trial load method of analysis, the method developed in the Denver office of the Bureau of Reclamation during the past five years. The first stages in the development of this method were described in the "Transactions" of the American Society of Civil Engineers for 1929, in an article by C. H. Howell and the late A. C. Jaquith, entitled "Analysis of Arch Dams by the Trial Load Method."

The trial load method, as developed thus far, takes into account uplift at the base of the dam and within the concrete; radial sides of the cantilever elements; temperature changes in concrete, as produced by both setting heat and exterior air and water temperature variations; transverse shear in both arch and cantilever elements; tangential shear between the arches; the effect of twist; and the effect of foundation and abutment deformations in both arch and cantilever elements. Other problems being comprehensively investigated in connection with the design of Boulder dam are the effects of water-soaking of the concrete near the upstream face of the dam, flow of concrete, Poisson's ratio, variations in modulus of elasticity and the non-linear distribution of stress between the two faces of the dam. Although the studies are far from complete at the present time, the indications are that some of the above-mentioned effects, especially the last, are of relatively great importance in the design of so high a dam.

Plans for Outlet Works

Outlet Works—For the discharge and regulation of irrigation water it is proposed to install in both canyon walls needle valves connected by tunnels to the reservoir above the dam. Because of the unusual head of water, the needle valve is the most satisfactory method of regulating the outflow. Part of the needle valves will be connected to the inside diversion tunnels and the remainder to the penstock tunnels, but all valves will receive water through the power intake towers. The size of valves, size of feeder tunnels and total capacity of valves are tentative under the present scheme and may be materially altered when the final designs are completed. As now planned, the only openings through the dam will be the outlets at river level, for passing the low-water flow of the river while the diversion tunnels are being plugged.

Spillway—Under the present plan of flood regulation a spillway of only nominal size would be required, but because of the location of the power plant, the great height of

the dam and the damage which might result should an abnormally large flood overtop the dam, spillways of ample capacity will be provided. The exact type, location and maximum capacity have not been definitely determined. Further study and comprehensive model experiments will be required before final designs can be made. The interests of the delta region will be best served by limiting the flood discharge to a very nominal flow, but the safety of the dam and power plant demands that provision be made to prevent overtopping of the dam by any considerable depth of water.

The glory-hole type of spillway shown in the accompanying drawings discharges through 50-foot diameter vertical shafts into the outside diversion tunnels. They are of ample capacity to discharge any flood that may be anticipated without overtopping the dam.

Power Plant—Tentative plans for the proposed power plant contemplate an installation of approximately a million horsepower. The power plant will be located immediately below the dam, one-half on the Nevada side of the river and the other half on the Arizona side, forming a U-shaped structure with the base of the U resting on the downstream toe of the dam.

Two of the large diversion tunnels of the four which are to be excavated through the rock walls of the canyon for use in the construction period, each controlled by an intake tower equipped with shut-off gates and trash racks, will deliver water to the penstocks, which will connect with the turbines. Each pressure tunnel will serve a group of turbines independently of the others, which will make it possible to take any one of the pressure tunnels out of service for inspection or maintenance purposes without affecting the power output of the remaining 75 per cent of the plant capacity. Due to the value of the power generated, it is quite probable that storage of water and the operation of the plant will be started before the construction of the dam is finished and the project formally completed.

Construction Railroad—Access to the site and supply of materials and equipment constitute the most important preliminary problem of construction, now that river and rock conditions have been fully explored. Access will be from the north or right bank. Already the Union Pacific Railroad Company has located a construction railroad from a point on the main line about seven miles southwest of Las Vegas, Nev., following an easterly course and ascending on easy grades to the Interchange Yard, thence, descending on comparatively steep grades, as high as 5.12 per cent, to the top of the canyon wall at the damsite. At the Interchange Yard the usual type of locomotive will be changed for one adapted to the heavy grades beyond. Just before reaching the damsite the railroad crosses Hemenway Wash, an area about 10 miles long and two miles wide, having a rather uniform slope of about 4.5 per cent, from which the concrete aggregates will probably be obtained and near which the permanent town will be built. The accompanying map shows the construction railroad; also a tentative location of a proposed railroad down Hemenway Wash and along the river to the damsite, for use in transporting tunnel muck, foundation excavation and cofferdam materials. A survey of a switchback line from the switchyard to the river level below the damsite was made by the Union Pacific engineers, but because of the excessive cost an inclined railroad will probably be built from the canyon rim to the river level below the power plant as a permanent means of access to the plant.

River Diversion—The plan of river diversion being considered at the present time contemplates upstream and downstream cofferdams with diversion tunnels on both sides of the river designed for a maximum diversion capacity of 200,000 second-feet as recommended by the Colorado River Board, the tunnels to be utilized as power and spillway conduits after the dam is completed. Different heights of cofferdam and various numbers and sizes of diversion tunnels are being considered, the indications at present being that four tunnels with diameters somewhere between 35 and 50 feet will ultimately be adopted. In view

of the excellent character of rock in the canyon walls, the driving of the tunnels probably will not involve particularly difficult problems. Tunnels of larger size have been successfully driven (see "Engineering News-Record," November 25, 1920, page 1046). The time required to drive the tunnels is the most important factor in their construction, since any appreciable delay in completion would postpone the diversion of the river for an additional year. The river must be diverted immediately after the passage of the summer flood in order to provide sufficient time for the construction of

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the cofferdams before the next flood season arrives.

Sequence of Construction—Before work can be started at the damsite it will be necessary to build the construction railroad, to provide adequate housing facilities and to secure electric power for construction purposes. The first step in the program will be the construction of the railroad. The next step will be the building of a complete town with all modern improvements, including sewer and water-supply systems, the water supply being obtained from the Colorado River. Construction of a temporary power plant, or of a transmission line from some outside power source, can proceed simultaneously with the building of the railroad and the town.

As soon as transportation, housing and power facilities are available, the driving of diversion tunnels will be started. On completion of the tunnels, the river will be diverted and the upstream and downstream coffer dams built so that the foundations for the dam can be unwatered and the foundation excavation made. Stripping of loose rock on the canyon walls, excavation of highway approaches and such abutment excavation as may be required will be carried on while the coffer dams are being built. As soon as the foundation excavation is made, pouring of mass concrete will be started. Concrete work in the spillway, power tunnels and outlet works can proceed simultaneously with the pouring of mass concrete in the dam. It is estimated that all work can be completed within seven years.

The construction of the main line of the All-American Canal will be a six-year program and the work can proceed simultaneously with the construction of the dam. No estimates of the time required to build the Coachella branch of the All-American Canal have been made thus far.

All-American Canal—The construction of the All-American Canal is needed because of international problems involved in the distribution of Colorado River water, in order to develop higher irrigable areas in the Imperial and Coachella valleys and to serve as an aid in solving silt-removal problems. The canal will run in a southwesterly direction, generally parallel to the Colorado River, to the international boundary line, thence in a westerly direction and at varying distances north of the boundary to a point about 10 miles west of Calexico, Calif. The total length of this section of the canal will be between 75 and 80 miles, depending on the diversion point selected. Present studies contemplate a maximum canal capacity of 15,000 sec-ft. Power can be developed at various sites along the route of the canal, principally at Siphon Drop, Pilot Knob and possibly three or four places west of the sand hills. The Coachella branch diverts from the main canal at a point about 40 miles from Laguna dam, runs northwesterly to a point near Indio, Calif., northwest of the Salton Sea, and thence southerly to a point near the northern boundary of Salton Sea, the length of this branch being about 140 miles.

The sandhill area, which must be crossed by the canal, begins about 10 miles west of Yuma and is about 10 miles wide. The canal will cross this area in cuts of comparatively great depth, the maximum being about 100 to 120 ft., depending on the diversion site selected. The sand is relatively fine, locally known as "blow sand" and is moved by wind velocities as low as 10 miles an hour. Since the deposition of this material on irrigated lands is not desirable, some means of keeping it out of the canal or of removing it from the canal flow must be devised. Silt in the

river flow will be removed so far as practicable at the point of diversion.

Several locations above Laguna dam, as well as at Laguna, for diversion are being considered. If diversion is made at Laguna, some reconstruction of the dam will be necessary in order to obtain a higher diversion level. Upstream diversions have the advantage of making more head available for maintaining canal flow and for power development, as well as permitting reductions in the comparatively great depths of excavation required through the sandhill area. Although none of the sites above Laguna has been adequately investigated thus far, it is practically certain that rock suitable for the foundation of a concrete gravity dam will not be encountered at a reasonable depth at any of the sites and that consequently the so-called floating type of structure will have to be constructed. At one or more of the sites being considered rock is available on the diversion side of the river to serve as a foundation for the headworks structure. Rock is also encountered at three or four locations along the canal route.

The excavation and disposal of materials along the canal is a problem that is being given careful consideration. It is possible that great economies may be effected by the development and use of equipment not now in general use. There is no precedent in this country for a canal as large as the one being considered, the Imperial Canal, which has less than one-half the capacity of the proposed All-American Canal, being the largest now in operation in this country.

What the Project Will Cost

Cost—The cost of the Boulder Canyon project as estimated by the Colorado River

Board, assuming a construction period of seven years, will be as follows:

Dam and reservoir (26,000,000 acre-ft.)	\$70,000,000
1,000,000-hp. development	38,200,000
All-American Canal	38,500,000
Interest on above, during construction	17,700,000
Total	\$165,000,000
Additional needed for Coachella Canal	\$11,000,000

A total expenditure of \$165,000,000, subject to subsequent appropriation acts, is provided for in the Boulder Canyon act. The construction of the Coachella branch of the All-American Canal may require additional authorization and appropriations of approximately \$11,000,000.

RADIO

(Continued from page 518)

values, particularly in recent photo-electric cell developments, we are on the very border line of insulators and high-resistance conductors.

One thing certain, and that is the relative perfection of resistors employed in present-day radio sets. Several years ago, the resistor art was still experimental. Many resistors placed in sets made a few years ago, were unstable. Their resistance values changed. And this fact accounts for the poor results obtained with sets three or four years old. The resistors have changed several hundred per cent in value. If new resistors of proper resistance values were installed in such sets, the old-time sensitivity and selectivity, and frequently tone quality, would once more be enjoyed.

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Application Blanks, per 100	\$.75	Ledger, Financial Secretary's, 200 pages	4.50
Arrears, Official Notice of, per 100	.50	Ledger, Financial Secretary's, 400 pages	8.75
Account Book, Treasurer's	1.00	(Extra Heavy Binding)	
Ballot Boxes, each	1.50	Labels, Metal, per 100	1.75
Buttons, S. G. (medium)	1.75	Labels, Paper, per 100	.30
Buttons, S. G. (small)	1.50	Labels, large size for house wiring, per 100	.50
Buttons, R. G.	.75	Obligation Cards, double, per dozen	.25
Buttons, Cuff, R. G., per pair	2.50	Paper, Official Letter, per 100	.75
Button, Gold-faced Diamond Shaped	2.50	Rituals, extra, each	.25
Book, Minute for R. S. (small)	2.00	Receipt Book, Applicants (300 receipts)	2.40
Book, Minute for R. S. (large)	3.00	Receipt Book, Applicants (750 receipts)	4.80
Book, Day	1.50	Receipt Book, Members (300 receipts)	2.40
Book, Roll Call	1.50	Receipt Book, Members (750 receipts)	4.80
Carbon for receipt books	.05	Receipt Book, Overtime assessment (300 receipts)	2.40
Charm, vest chain slide	5.00	Receipt Book, Overtime assessment (750 receipts)	4.80
Charters, Duplicate	1.00	Receipt Book, Financial Secretary's	.35
Complete Local Charter Outfit	25.00	Receipt Book, Treasurer's	.35
Constitution, per 100	7.50	Receipt Holders, each	.25
Single Copies	.10	Seal, cut of	1.00
Electrical Worker, Subscription per year	2.00	Seal	4.00
Envelopes, Official, per 100	1.00	Seal (pocket)	7.50
Gavels, each	.50	Withdrawal Cards, with Trans. Cds., per dozen	.50
Ledger, loose leaf binder, Financial Secretary's, 26 tab index	6.50	Warrant Book, for R. S.	.50
Ledger pages to fit above ledger, per 100	1.50		
Ledger, Financial Secretary's, 100 pages	3.00		

FOR E. W. B. A.

Application Blanks, per 100	.75	Constitution and By-Laws, per 100	7.50
Book, Minute	1.50	Single Copies	.10
Charters, Duplicates	.50	Rituals, each	.25
		Reinstatement Blanks, per 100	.75

METAL



1225

LABEL

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LOCAL UNION OFFICIAL RECEIPTS FROM JULY 11 TO AUGUST 10, 1930

L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS					
I. O.	17047	18049	109	648686	648695	240	857696	857704	406	930999	93111	585	721264	721284
1	75318	75750	110	163735	163856	241	606847	606856	407	731898	731905	587	601072	601075
1	219001	219236	111	996874	996880	243	138751	138764	408	961684	961748	588	823511	823555
1	697929	698000	113	837026	837082	244	704334	704337	409	977291	977350	591	695601	695615
1	258901	259200	114	733693	733698	245	136635	136697	410	606336	606340	593	35926	35940
1	258301	258320	116	956306	956451	246	189751	189792	413	152379	152451	594	691480	691491
2	957781	957960	117	692736	692750	247	604327	604337	416	90810	90819	595	885557	885730
4	647231	647246	121	653951	653960	248	671748	671776	417	249512	249551	596	440430	440442
5	124371	124500	122	180221	180370	249	634218	634223	418	891304	891350	598	664429	664436
5	190501	191080	124	215251	215750	251	694852	694871	418	228751	228781	599	924507	924525
6	64801	64920	124	158869	159000	252	149317	149351	421	619171	619190	601	546403	546422
7	863241	863354	125	898104	898668	254	98850	98867	424	615112	615123	602	536035	536130
8	867799	867834	127	857013	857023	256	436443	436461	425	731688	731691	603	620701	620711
9	759110	759350	129	314508	314521	257	651466	651490	426	700423	700431	607	600821	600832
9	760101	760690	130	127291	127540	258	688142	688149	427	134387	134408	612	170258	170260
10	665366	665403	131	772989	773066	259	913581	913634	428	549260	549279	614	732068	732073
12	800732	800760	132	691755	691758	260	970039	970042	429	871538	871586	617	693979	694008
14	36782	36807	133	316144	316163	262	792906	792954	430	258019	258037	619	675315	675329
15	863744	863754	134	181501	182110	263	689761	689782	431	989919	989926	623	998676	998700
17	159911	161070	134	961851	962600	264	39042	39048	432	601863	601867	625	482050	482077
18	151081	151500	134	84001	84400	265	566920	566936	435	66261	66360	627	852497	852510
20	112029	112112	134	82528	83250	267	679444	679456	437	117131	117230	630	595354	595369
22	107273	107392	134	963311	963350	268	417425	417429	440	123607	123620	631	944730	944749
26	96862	97080	134	54001	54146	269	124559	124689	441	703423	703438	632	678233	678243
26	939875	939950	134	83251	84000	271	73608	73661	442	39788	39799	636	230789	230844
27	868958	868960	134	86541	87000	275	518099	518036	443	680305	680314	640	33251	33297
28	102794	102794	134	84751	85500	276	354382	354397	446	698670	698700	646	820503	820504
30	598358	598384	134	90001	90750	278	410937	410957	449	616707	616725	648	97701	97835
31	150459	150483	134	57001	57470	280	589088	589099	451	608152	608157	649	216771	216808
32	596935	596937	134	89251	90000	281	220356	220357	453	672683	672694	653	674276	674300
33	441626	441641	135	859310	859344	283	701617	701635	454	696443	696451	653	261301	261313
34	746806	746903	136	936107	936158	285	641134	641151	456	740391	740427	654	599233	599240
35	100046	100155	137	215662	215667	286	639222	639331	458	260711	260730	664	667499	667523
36	704931	704953	138	785973	785999	288	701119	701153	465	77723	77806	665	555349	555393
38	825231	825350	139	788231	788276	291	527731	527748	468	666223	666276	666	491131	491182
38	826101	826940	140	99283	99348	295	992369	992376	470	654896	654909	668	74328	74343
39	120057	120640	141	155132	155157	296	977051	977060	471	662557	662576	669	921646	921664
40	171341	171608	143	739727	739805	300	966784	966786	472	612081	612110	670	175739	175746
41	115525	115800	145	91808	91862	302	702821	702829	473	620981	620992	675	32617	32655
42	629024	629050	146	988708	988715	305	698488	698520	477	503831	503869	677	122260	122308
43	949191	949299	150	700716	700752	308	158617	158647	479	320815	320837	681	457986	458037
44	973433	973440	151	79946	80170	309	134016	134245	480	612399	612420	683	926911	926939
45	977602	977672	152	576280	576300	311	116472	116538	481	173420	173519	684	538686	538700
46	972861	973060	153	931295	931320	312	791383	791469	483	61117	61217	686	30750	30761
47	651077	651089	154	841784	841797	313	665721	665810	488	914385	914466	691	690347	690391
50	529446	529478	155	417721	417740	314	307244	307291	490	80663	80667	694	94222	94334
51	923032	923073	156	702556	702585	317	224165	224229	492	865538	865580	695	716981	717006
52	938626	939350	157	649799	649807	318	282101	282123	493	666515	666523	696	907497	907575
52	138001	138095	159	110456	110507	318	657783	657800	494	132124	132606	697	168140	168324
53	771341	771350	161	594630	594645	319	390865	390873	497	639048	639083	701	812130	812202
53	216001	216059	164	106891	107155	321	706703	706721	500	698979	699045	702	72291	72750
54	618018	618030	165	654581	654586	322	854650	854655	501	111402	111601	702	337951	338000
55	802319	802344	167	628745	628763	323	657869	657988	502	674751	674779	704	39736	39750
56	112601	112703	169	673791	673799	323	601697	601700	504	793306	793320	704	212251	212283
57	172523	172544	170	671949	671951	325	37774	37805	509	596723	596738	707	294631	294653
58	918321	918350	173	637356	637373	326	599768	599787	510	704086	704106	710	611207	611225
58	918909	919100	174	619992	620010	328	678869	678904	514	807301	807350	716	68601	68890
58	222751	223214	176	107219	107241	329	693121	693155	514	207001	207040	717	222001	222068
58	919101	919850	177	785490	785535	333	915999	916091	515	631434	631443	719	441495	441511
59	154091	154190	178	397429	397438	334	691153	691164	516	618387	618411	722	978216	978231
60	214501	214560	180	164251	164270	335	622483	622494	517	695354	695366	728	949378	949386
60	3691	3750	181	832756	832816	338	703731	703742	520	801841	801877	729	14762	14770
62	663883	663903	184	444215	444225	339	902186	902229	521	706407	706413	731	460128	460140
65	126321	126540	185	219782	219825	341	777601	777618	522	904264	904343	732	125328	125378
66	161651	161920	186	693551	693554	342	589300	589307	525	600296	600300	734	139538	139650
68	169611	169628	187	705334	705850	343	648354	648364	525	679401	679440	735	670848	670862
69	532670	532675	190	687984	688000	344	688750	688759	527	661507	661536	743	722413	722475
70	969892	969900	191	635991	636000	345	655456	655471	528	747998	748033	757	697270	697299
70	659001	659007	191	259801	259816	347	950413	950445	529	988110	988131	759	734692	734698
72	958216	958232	193	260426	260467	348	109621	109630	530	688533	688541	760	605273	605294
73	71076	71172	194	959249	959305	349	663581	663595	532	809511	809600	762	658576	658610
75	647645	647647	195	21604	21697	349	123018	123182	532	220501	220538	763	660125	660142
76	929242	929303	196	959964	960000	350	995679	995689	535	745760	745790	770	657029	657122
77	175524	175707	197	583621	583632	351	978880	978893	536	629848	629865	771	330547	330551
79	946003	946084	200	24591	24670	354	165060	165087	537	168789	168809	772	702233	702239
80	870652	870691	201	723864	723874	355	638528	638538	538	334443	334470	773	475285	475384
81	607861	607932	203	630530	630535	356	653097	653111	539	907987	908002	774	799355	799385
82	12841	12967	204	622851	622870	358	861816	861871	543	692042	692048	784	885118	885166
83	185091	185250	205	174009	174023	363	305225	305250	544	867094				

L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS	L. U.	NUMBERS
869	546551	546573	996	626324	626339	124	158982, 215475.	697	168289.
870	794354	794385	1002	59508	59560	125	898668.	702	72585.
873	364175	364195	1012	668913	668916	131	772989-990.	811	968043.
874	664103	664128	1024	117908	117952	132	691756.	817	121375.
875	625222	625229	1025	973031	973039	205	174013.	865	98572-98573.
877	680001	680038	1029	789620	789640	215	85403.	1037	20723.
885	671259	671281	1036	445893	445906	222	860765.	1101	341529.
886	259316	259337	1037	20651	20750	245	136681.		
892	651658	651673	1042	673129	673133	269	124660.		
900	597612	597622	1045	280096		302	702823, 828.		
902	543600	543632	1047	430357	430390	308	518628, 645.		
907	38951	38954	1054	733146	733153	309	134039, 160-161, 198.		
912	28967	29033	1057	482342	482352	314	307257.		
914	72617	72656	1072	858458	858484	323	657871, 601697-700.		
915	971309	971318	1086	699625	699657	326	599783.		
918	704654	704679	1087	681236	681244	365	822280.		
931	862518	862521	1091	350814	350828	382	628161, 164, 170.		
940	669559	669574	1095	599574	599584	387	651991-997, 652008.		
948	834869	834923	1099	787321	787347	405	536768, 795.		
953	134137	134159	1101	341509	341536	429	871571-580.		
956	632865	632878	1105	658123	658140	443	680306-307.		
958	657236	657242	1108	645748	645768	446	698693.		
968	869525	869527	1118	622268	622326	500	699042.		
969	634078	634094	1131	994432	994441	501	111429, 600.		
970	694430	694438	1141	689193	689220	527	661511-517.		
971	443051	443054	1144	533872	533877	532	809519.		
972	665035	665043	1147	690965	691010	564	740667.		
978	325987	326008	1151	459870	459871	569	81367.		
982	439100	439114	1156	114377	114479	584	175167, 170.		
995	639730	639943				648	97740, 97760.		

PREVIOUSLY LISTED MISSING—RECEIVED

190—687979.
325—37755-37772.
451—608149.
564—740667.
612—170254-255.
1087—681226.

BLANK

58—918914-915.
103—41503.
177—785490.
321—706710.
1087—681226.

PREVIOUSLY LISTED VOID—NOT VOID

817—906968.

NOTICES

Editor:

I have been instructed to have this notice put in the Journal:

Notice to business agents; the showcases of the Grand Rapids Store Equipment Co. are not wired by members of Local Union No. 107, of the I. B. E. W.

GEORGE HELMS,
Recording Secretary, Local No. 107.

We are advised by Local Union No. 336, Klamath Falls, Oreg., that Andy J. Fraley, a former member of the Brotherhood, who paid last for December, 1928, is using an official membership receipt for identification, and passing out bad checks.

We have received complaints against this same man from Local Unions No. 125 and 982. Please advise all members of the actions of this former member.

Any member who is working in this jurisdiction and who has not deposited his traveler will be assessed the sum of \$10 as per Article 26, Section 5. This applies to members of other locals who are working in our district and have been for some time, and who are violating our working rules.

All locals will take notice of Article 26, Section 6, New Constitution. Any violation will be brought to the notice of our International Office.

Executive Board, L. U. No. 271,
Wichita, Kans.

Owing to the fact that we have a large number of members out of employment, we are placing into effect Section 9, Article 23 of the constitution.

E. L. DUFFY,
Recording Secretary, L. U. No. 110,
St. Paul, Minn.

CONSTANTIN MEUNIER SINGS BRONZE HYMN OF LABOR

(Continued from page 509)

Modern, Yet Suggests Greece

I have never seen this monument, which is in Louvain. I have seen the sculptured panels which adorn its sides; and they are splendid beyond words. "Industry," "The Harvest," "The Port," and "The Mine"—they are modern in subject, modern in treatment, but in some mysterious manner (don't ask me to explain it) they recall the best sculpture of old Greece. It is a shame that none of them can be reproduced successfully in ordinary cuts.

Meunier lacked a week of being 74 when he died. He worked to the last; one of those wonderful panels was finished just a few days before his death; and he had the satisfaction of knowing that the government at least had taken hold of the project, and the monument to labor was assured.

Personally, Meunier was tall and gaunt, with the forehead of a sage and the beard of a prophet, light blue eyes and dark hair. I have no idea of his political preferences, if he had any, but artistically he was a socialist. His workers, even when standing alone, seem part of an ordered group. They are individuals, but they are never isolated; the gospel of co-operation and collectivism is in them somehow.

He was a Bible reader to a degree unusual in his country; he was also fond of reading Flaubert and Zola. When a young man, he spent some weeks or months in retirement in a Trappist monastery. He loved music; especially Beethoven and Wagner. But aside from a few Bible themes, it is not easy to see that anything he read or heard, or any of the artistic dogmas and doctrines of his time had much influence on his great work, his bronze hymn of labor.

UNEMPLOYMENT REMAINS MOST BAFFLING PROBLEM

(Continued from page 505)

Labor's platform is outlined by President Green thus:

- (1) Fewer hours per day.
- (2) Fewer days per week.
- (3) Forward planning on the part of management.
- (4) An annual wage.
- (5) Higher wages.

President Green demands work stabilization as a part of rationalization.

President Hoover has appointed A. O. Wharton and John P. Frey as labor representatives on a commission composed of government, business and labor men, to work out a solution for unemployment.

"CURRENT TRANSFORMERS"

A 36-page booklet

A tool box reference for switchboard and control wiremen. Introductory price of 25 cents cash postpaid to members of I. B. E. W.

R. N. Coffman, Hopewell, Va.

HIGH TRADE STANDARDS SET BY ELECTRICAL GUILD

(Continued from page 507)

unusual attention to himself by his writings and addresses in the field of practical economics. He has been foremost among American employers in espousing the "rule of reason" in industry as opposed to the "rule of force." In temperament and personal appearance, Mr. Comstock resembles former President Theodore Roosevelt, and he has much of the drive, liberalism, and clear thinking ability of the statesman. High tribute was paid him at the Miami convention of the International Brotherhood of Electrical Workers.

Who's Who gives this sketch of Mr. Comstock's life:

Comstock, Louis Kossuth—Electrical Engineer. Born Kenosha, Wisconsin. January 8, 1865. Son of Charles Henry and Mercy Bronson Comstock. Ph.B. University of Michigan, 1888. Married Anne Wilson, Detroit, September 12, 1902. One son Thomas B. With North American Construction Company, Pittsburgh, Pa., 1888-91. In practice as constructing engineer on own account, Chicago, 1891-97. Superintendent construction for Western Electric Co. 1897-1900. Electrical engineer with George A. Fuller Co. of New York, 1900-1904. Organizer, 1904, L. K. Comstock and Company. President 1904-26, now chairman of Board. V. P. 70 E. 77th St. Co., Ellinda Corp., Elcoda Corp., Langham Corp., Evanston Corp., 16 E. 52nd St. Corp. Secretary, Ellbar Realty Corp. Has installed electrical and mechanical equipment in many of the largest buildings and industrial plants in New York, Chicago, Canada and other localities. Member, War Industries Board 1918. Director, Merchants Association, delegate at 4th Congress—International Chamber of Commerce, Stockholm. Fellow, Am. Inst. E. E. Member Am. Soc. M. E. Acad. of Political Science, Am. Numismatic Society. Clubs: Engineers, Uptown, Michigan Univ. Lotos, Manhattan, Univ. (Chicago), Union Interalliee (Paris), Montclair Golf. Home address: Montclair, N. J. Office address: 16 East 52nd St., New York City.



DIAMOND-SHAPED BUTTONS

To wear in your coat lapel, carry the emblem and insignia of the I. B. E. W. Gold faced and hand-somely enameled. \$2.50



THE POLITICS OF INDUSTRY

¶ Until December, the center of America's official life has passed to various state arenas, where important elections agitate whole populations.

¶ Important popular decisions—bitter controversies—but behind them all the darker questions of industrial life, unemployment, child labor, injunction rule, decent wages, a fair standard of living.

¶ The politics of today is the politics of industry. Every real political issue has lurking within it economic issues, and every economic question turns on the labor question.

¶ Every month there passes in review upon the pages of the *ELECTRICAL WORKERS' JOURNAL* a complete panorama of the events, problems, issues, and ideas, that go to make up the sum total of the labor struggle, that is, the industrial complex.

¶ This *JOURNAL* is read widely by important men in this and every other country of the world because it treats authoritative matters authoritatively.

ELECTRICAL WORKERS' JOURNAL

THE first-rate technician is generally much more interested in his craft than in his personal fame, or even in his life. In order to obtain the necessary conditions to create a masterpiece or perfect a new process he is perfectly willing to lose himself in a glorious anonymity. The architects of many of the world's greatest buildings, like the great inventors, are often unknown, and generally mere names. The knowledge that this would be so would not have distressed them.

J. B. S. HALDANE,
British Scientist.

